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ABSTRACT

The first Innocenti Global Seminar, which was sponsored by the United Nations Children's Fund (UNICEF), investigated the topic of Early Child Development (ECD). This summary report focuses on the three objectives of the seminar, which were to: (1) review critical issues in the field of child development so as to provide a rationale for investing in ECD programs; (2) examine stategies for the design, implementation, and evaluation of ECD activities, and review UNICEF-supported initiatives; and (3) explore issues in program implementation. To meet the first objective, research on prenatal development, and infant capacities and patterns of interaction, was reviewed. Biological, behavioral, and social factors were examined. For the second objective, a five-category model of ECD programs was delineated. Topics included increased program coverage, funding problems, methods of creating political will, the role of media in promoting ECD, program quality control, training of ECD personnel, and monitoring of programs. Successes and constraints of ECD programs in India, Benin, Nepal, Colombia, and Kenya were appraised. Efforts to address the third objective focused on policy implications; programming challenges; and the contributions of UNICEF. References number 57. Appended are the agenda, a list of participants and speakers, lists of resources and reading materials, and related items. (BC)

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INNOCENTI GLOBAL SEMINAR

EARLY CHILD DEVELOPMENT

SUMMARY REPORT

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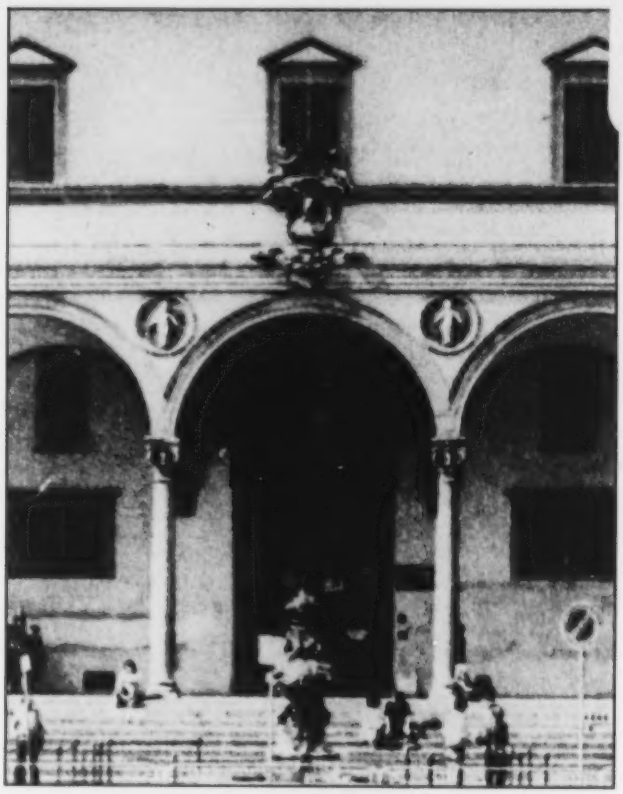

UNICEF International Child Development Centre
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Florence, Italy

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Prepared by
Cassie Landers

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United Nations Children's Fund

INNOCENTI GLOBAL SEMINAR

EARLY CHILD DEVELOPMENT

12–30 June 1989

SUMMARY REPORT

UNICEF
International
Child Development Centre
Spedale degli Innocenti
Florence, Italy

Prepared by
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Consultative Group on
Early Childhood Care and
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UNICEF House, 3 United Nations Plaza, New York, NY, 10017
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INNOCENTI GLOBAL SEMINAR
EARLY CHILD DEVELOPMENT
SUMMARY REPORT

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FOREWORD

Development of young children encompasses their survival and good health. It also involves their cognitive, emotional, ethical and social growth. As the field of child development has changed rapidly in the past two decades, research findings have emerged that the international community has not yet fully digested or appropriated for its policies and programmes. Here lies a great potential.

For instance, it has long been accepted that health and good nutrition support the psychological and social development of the child. This has been one of the many justifications for major efforts the world over to guard the health of children. But scientists have more recently alerted us to the reverse relationship—to the fact that psychological and social well being have an impact on nutrition and health and hence on growth and survival. The import of these findings is that health, nutrition, early stimulation, and education must be considered together in programming for both survival and development.

It is not widely enough known that meeting the social and psychological needs of young children and integrating them with nutritional and health needs, can be accomplished at relatively low cost. No expensive supplies are required. Indigenous materials adapted appropriately—bottle caps for counting and sorting or sections of bamboo for grading and matching—can be equally effective as expensive imported development and education materials for young children. Most of all, children need love and attention. This does take time and energy, which can be considerable, and therefore families and caregivers need support in "developing the child through love."

What really needs to be shared is *information*, passed on through the training and education of parents as well as centre-based caregivers. Information should be shared in such a way that people who look after children are supported in applying what they know and are encouraged to use the simple materials and to respond effectively to the active child.

It is time to take a quantum leap in order to move the field of early child development to a new level. It is time to look beyond experiments with pilot and demonstration projects to see how this work can be applied to a vastly larger number of children. Advocacy and guidance to policymakers should focus on this larger challenge. We must ensure that early child development components are woven into existing large-scale programmes affecting children. We must ensure that child care programmes—whether centre- or home-based—are provided to children whose needs would not otherwise be met. And we must move to a new level in our training of people in child development and education activities.

UNICEF sees six specific challenges as we look to the future. A first challenge is to ensure that a major effort is made to work directly with parents and communities to empower them with knowledge that will increase survival and promote development. Given economic restraints, limited resources must be used to reach the largest number with the most effective approaches. Working with parents and other caregivers must take preference over increased expansion of expensive centre-based programmes which reach relatively few of those in need. Where centre-based programmes are operating, parents and other caregivers must be involved.

A second challenge is to pursue the programme combination of health, nutrition, and education which has proven to increase rates of survival and to help children develop to their full potential. Educators must find ways to incorporate health into their programmes and those in the health field must seek allies in education and other fields.

Third, we must insist that where technology can be applied to help children, it be applied to reach those most in need. For instance, in mobilizing the mass media, TV "spots" may show how to use local materials for developmental activities. Radio may sometimes be much more effective than television in some places to reach out broadly. Out-of-the-way areas may benefit most from video cassettes designed for use with portable video systems.

Fourth, we must turn the attention of professional and academic groups from the most advantaged sectors towards those most in need. A challenge for professionals will be to carve out a new role in which their expertise is used more for training and for motivating paraprofessionals than for direct attention to children in classrooms.

The fifth major challenge that will require creative thought and action as we approach the 21st century relates to the readiness of children for school. This challenge is especially relevant to activities related to the Jomtien, Thailand World Conference on Education for All: Meeting Basic Learning Needs. A fundamental part of the "Education for All" initiative must be the strengthening of early child development. Although there is a tendency for educators to concen-

trate on teachers and materials and facilities, we must recognize that the most important input to primary schooling is the *child*. We must improve the readiness of children for school without, however, falling into the trap of simply teaching them the alphabet at an earlier age. We must also be aware that readiness may lie as much in overcoming iron or vitamin A deficiency, and in ensuring good health, as it does in improving the cognitive ability or social and emotional security of a child.

At the same time, all of the responsibility for adjustment must not be placed on the child or on the child's family. Schools need to consider, for instance, what language of instruction is best for children at the time they enter school. They need to seek ways to incorporate culturally appropriate materials into the curriculum. They need to prepare teachers for children who have learned to be inquisitive in a variety of early education programmes. As we look to the future, the artificial split between "preschool" and "school" responsibilities needs to be muted, and we must focus anew on child development for the important years from birth to age 7 or 8.

Finally, perhaps the greatest challenge as we approach the 21st Century is to continue to expand the Alliance of governmental and nongovernmental institutions that will promote childrens' rights and welfare. We must insist on needed investments in early child development, and we must double our efforts to overcome sectoral barriers against working with the whole child.

How we respond to the needs of children affects the civilization we ourselves comprise, and the one we are helping to build. Whether we think in terms of a necessary investment in days of constrained resources, or in terms of our moral obligations to our children—and to the future—can we afford to neglect the basic but urgent developmental needs of children?

James P. Grant
Executive Director
United Nations Children's Fund (UNICEF)

PREFACE

Whether early childhood development activities benefit children is no longer a question. The scientific community has held for some time that children whose developmental needs are met do better in life than children who are neglected in this domain. The developmentally appropriate care children receive while they are young has a remarkably positive impact on their intelligence, personalities and social interactions well into adulthood. This basic point was a key element of the background understanding among participants in the Innocenti Global Seminar on Early Child Development (ECD) held in June 1989 at the UNICEF Centre in Florence. The principal objective of the seminar was to present the most recent scientific knowledge and conceptual approaches in child development and to review and evaluate ECD programmes supported by UNICEF and other organizations, with a view to drawing policy and programming lessons.

It has long been widely accepted that good health and nutrition support the psychological and social development of the young child. Less widely recognized, however, are the more recent findings that developmentally sensitive interaction with a child—namely, interaction that satisfies the child's need to grow socially, psychologically, and cognitively—has a direct and measurable impact on the both the health and the nutritional status of the child. Although the implications of these interactive effects are of considerable importance for the health and well-being of children, they have been generally overlooked in development planning for children. It is increasingly evident that societies can no longer afford to neglect the intersecting needs of parents (especially mothers, but increasingly fathers), infants, and young children, and the needs of the most basic of all social units: the family (whose needs are best understood in close relation to the surrounding community and culture). It is especially important that we build on the natural opportunities that arise within the family to foster the full development of the child's potential. The question is not so much whether but when and how community and family-based child development programmes, particularly for high-risk families, will begin to receive the attention so clearly and urgently required at all levels of society.

The neglected subject of child development might well receive greater international and national-level attention as a result of a number of emerging issues and mounting problems:

- The dramatically increasing number of women entering the labour force worldwide, with grossly inadequate responses as regards developmentally appropriate child care from governments, the private sector, communities, and fathers

- A slowly growing consciousness of the social consequences (school drop-out, juvenile delinquency, teenage pregnancies, drug addiction) of neglecting the young child's development and of the major qualitative improvements needed in primary-level and parental education

- The severe economic difficulties many societies will face in the coming years if substantial improvements in basic education, starting with education of parents and young children, are not achieved

- Increasing recognition of the need to ensure the sustainability of recent gains in child survival through the strategy of empowering parents with knowledge about child survival and development; also, recognition of the need for effective and caring childrearing as a key element in the preparation of responsible future parents and mature citizens

Major tasks facing UNICEF and its partners now are to integrate the kinds of findings reviewed in this seminar into ongoing programmes and to address in a more concerted manner identified obstacles to further progress. It will be especially important over the next few years to determine how ECD elements can be incorporated into existing programmes that are currently narrowly oriented towards child health and nutrition. Seminar participants agreed that there is considerable potential in capturing the attention of the mass media as allies in promoting ECD themes. Religious institutions and governmental organization's must also become more engaged both in helping to provide ECD training and programme support and in incorporating developmental appropriateness into existing child and parent activities.

What the child experiences from birth onward influences the society of the future. How we respond to the interrelated health, nutrition, and developmental needs of today's young children affects the civilization we are building for generations to come. How will we respond to the challenge of this realization?

James R. Himes, Director
UNICEF International Child
Development Centre

INTRODUCTION

The UNICEF International Child Development Centre

UNICEF's International Child Development Centre (ICDC) located in Florence, Italy, has been in operation since September 1988. The Centre is housed within the Spedale degli Innocenti, a foundling hospital designed by Filippo Brunelleschi in 1445. The Spedale is one of the great architectural works of the Early European Renaissance.

In keeping with the Spedale's 550-year mission for children, the primary purpose of the ICDC is to strengthen the capacity of UNICEF and its cooperating institutions to foster an emerging global ethic that responds to the needs of children and their families. In accomplishing this objective, the Centre provides opportunities for the exchange of information among professionals in various fields and undertakes or promotes policy analysis, applied research, and dissemination of concepts directed towards the goals of child survival, protection, and development. Over the next decade, the ICDC aims to become both a vehicle and a voice for changing public policy related to children.

The initial activities of the ICDC's are concentrated in four major programme areas: (1) National Capacity Building for Child Survival and Development in Africa, (2) Economic Policies and Mobilization of Resources for Children, (3) Rights of the Child, and (4) Needs of the Urban Child. The Centre's core programme expenses and basic operating costs are financed by the Italian government.

An important component of the ICDC's work is to translate the results of research and policy analysis into relevant training programmes. Drawing on UNICEF-supported field experiences, NGO expertise, and resources from universities and research institutes, the training programmes invite the participation of UNICEF's professional staff and their national counterparts, of UNICEF national committees, and of other key allies. To avoid duplication with university-based study programmes, the Centre's efforts concentrate on policy issues and problem-solving techniques. The topics of the training seminars are selected to reinforce issues of importance to UNICEF's programming and policy analysis. The Centre regards its training process as a catalyst for ongoing initiatives and follow-up activities.

The Early Child Development Seminar

It was with much excitement, and perhaps to no one's surprise, that early child development was selected as the topic for the first Innocenti Global Seminar. In addition to being in accord with the Centre's mandate to learn about children, the subject of early child development, properly including comprehensive care of the child in his family, represents a critical component of social development programming. This is not the first time UNICEF has recognized the importance of early child development (ECD) programmes. In the early 1980s UNICEF was close to the action in providing support for child development initiatives in most countries. In redirecting our attention to this field as we are pressured by dramatic social and economic changes, it is important to reflect on the successes and failures of the past initiatives.

Some of the forces propelling UNICEF and other international donors to look at the benefits of investing in early child development include the following:

- Rapid urbanization and the disruption of stable family units
- The dramatic increase of women entering the labor force and the inadequate resources for child care
- The severe negative long-term social consequences resulting from neglect of children's developmental needs
- The economic and structural difficulties involved in the provision of basic education services
- A need to sustain recent gains in child survival through empowering parents to provide effective child care.

These are world-wide realities, and the recognition of their impact requires that solutions be generated through the collective expertise of academicians, planners, policymakers, communities, and parents.

Accepting this challenge, the first Innocenti Global Seminar considered the following topics related to the implementation of ECD programmes: (1) designing comprehensive strategies to reach those at greatest risk, (2) recognizing the developmental needs of children under two years of age, (3) understanding issues of costs related to programme expansion and quality, and (4) recognizing recent advances in the technology of early childhood education. Mr. James Himes, Director of the Centre, in his opening comments to seminar participants, remarked, "These are the challenges before us; let us not be deterred by the energy and commitment required in the quest for their solutions."

INNOCENTI GLOBAL SEMINAR
EARLY CHILD DEVELOPMENT
12–30 June 1989, Agenda

		Monday	Tuesday
WEEK ONE A Conceptual Look at Early Child Development	AM	Introduction Overview	Prenatal/Neonatal Development
	PM	Trends and Issues in ECD/Rationale for Programming	Mothers and Infants At-Risk
WEEK TWO Programme Strategies	AM	Examination of Five Complementary Strategies	Costing and Financing
	PM	Review of ECD Country Proposals/ Activities	Going to Scale
WEEK THREE Programming Issues and Policy Recommendations	PM	Monitoring and Evaluating ECD Programmes	Creating Political Will
	PM	WHO Project: Psychosocial Indicators	Media and Child Development

The Seminar was organized through the joint initiatives of Bilge Ogun, Innocenti Centre, Florence, Italy; Robert Myers and Cassie Landers, Consultative Group on Early Childhood Care and Development, New York, NY; and Alan Silverman, UNICEF Training Section, New York, NY. It was designed to achieve the following three objectives:

- To review critical issues and recent developments in the field of child development so as to provide a rationale, firmly grounded in theory and research, for investing in ECD activities.
- To examine a range of strategies in the design, implementation, and evaluation of ECD activities and to review practical experience of UNICEF-supported, and NGO initiatives.
- To explore issues in programme implementation, including programme integration, training, advocacy, community mobilization, coverage, and costs.

Through a series of invited presentations, plenary sessions, group activities, and participant reports, each week of the three-week Seminar was devoted to achieving one of the objectives. As outlined in the Summary Agenda on Page , week one reviewed the child's developmental process from the time of conception through the sixth year of life. The interplay between biological, social, and behavioural forces was underscored through attention to the developmental tasks defined by the prenatal, neonatal, infancy, and early childhood periods. Ways in which environments can support or curtail the quality of development were also addressed. Supported by the accumulating body of scientific evidence, pragmatic issues relating to programme strategies and policies captured participants' attention in week two. In-depth assessment of ongoing initiatives in India, Kenya, Colombia, Benin, and Nepal raised issues and provided insights into operational, financial, and technical aspects of ECD initiatives. The topics addressed in week three analyzed specific mechanisms for enhancing programme implementation. The complete seminar agenda is listed in Annex I.

The seminar's success was in great part due to the participation of international specialists from a wide range of disciplines. Week one presentations were made by Robert Myers, Edward Tronick, Nittaya Kotchabhakdi, Kathy Sylva, and Mina Swaminathan. Week two included presentations by James Himes, Robert Myers, and Urie Bronfenbrenner, as well as case study presentations by Sawon Hong, Micheline d'Agostino, Ana Sanz de Santamaria, and Ann Njenga. Seminar enthusiasm was maintained in week three by presentations from Richard Lansdown, P.M. Shah, Carlos Castillo, Bilge Ogun, Edward Palmer,

Wednesday	Thursday	Friday
Factors Affecting Development in the First Two Years	Development From 2–6 Years	The Role of Play
Touchpoints for Intervention	Social and Cultural Influences	Low-Cost Learning Materials Programme Implications
Case Study: India	Case Study: Kenya	Site Visit or Individual Study
Case Study: Colombia Coping Strategies in a Chaotic World	Case Study: Benin	
Training in ECD Preparing UNICEF Staff	Women's Work and Child Care	Summary: Policy Implications and Follow-Up Activites
Issues in Quality Control	Case Study: Nepal	

Kate Torkington, Alan Silverman, Cassie Landers, and Hoda Badran. Annex 3 gives a brief review of the invited speakers' backgrounds and current affiliations.

The seminar participants were selected on the basis of programme responsibility as well as previous training in child development. As listed in Annex 2, 24 additional participants representing 20 developing countries including Bangladesh, Nepal, India, Egypt, Zimbabwe, Ethiopia, Colombia, and Venezuela were selected. Of these participants, 18 represented UNICEF country or regional offices, while the remaining 6 were affiliated with UNICEF's collaborating agencies and governments. In preparation for the seminar, these participants were asked to review UNICEF's Training Package and Programme Guidelines and to prepare a report on the status of child development initiatives within their respective countries. The seminar was enriched by the wide array of field-level experiences reflected in these reports. Annexes 4 and 5 list the additional background reading materials and resources available to participants throughout the seminar.

Corresponding to the seminar objectives, this Summary Report is organized into the following three sections: A Theoretical Basis for Investing in Early Child Development; Programme Policies, Strategies, and Realities; and Summary and Policy Implications. The objective of each section is to provide a synthesis of the overall themes and issues rather than a summary of individual presentations and plenary discussions. Thus, many issues have not received the deserved depth of analysis. Also, the descriptive details emanating from group discussions may have been neglected in the summary of broader issues. Therefore, recognizing the limitations of this report, the Centre will distribute several supplemental papers that will provide greater analysis of critical topics highlighted during the seminar.

The distinction between the contributions of invited speakers and those of seminar participants is rather arbitrary, since the knowledge, insight, and practical experience of participants complemented the theoretical orientation of invited speakers. The commitment of all to the development of acceptable programming solutions is gratefully acknowledged. Thus, capturing the momentum generated by the seminar, this report is an attempt to weave the threads of many perspectives and, in the process, strengthen our arguments, clarify our strategies, and sharpen our perspective in the hope of creating a more enlightened programming strategy for children and their families.

A Theoretical Basis For Investing In Early Child Development
REVIEW OF CURRENT CONCEPTS

A Rationale for UNICEF Activities in Early Child Development

In proposing that international donors and governments turn their attention towards comprehensive programmes of early child development, a set of convincing arguments is required. ECD proponents must recognize the sources of negativism, disbelief, and skepticism that have previously curtailed programmatic activity in this field. Skeptics must be convinced of the capacity of financially feasible ECD programmes to achieve programme integration, elicit community support, and provide high quality services to at-risk children and their families.

Before turning to the growing body of scientific evidence that powerfully demonstrates the importance of the early years of a child's life and the long-term benefits associated with early intervention programmes, several compelling lines of social and economic arguments require recognition. These include

• **The human rights argument.** Children have a right to develop to their full potential. Allowing arrested development to occur, when it could be prevented, violates a basic human right. The 1959 Declaration of the Rights of the Child and the 1989 Convention designed to reinforce and extend its principles, are for many the most convincing and fundamental force supporting early child development programming.

• **The moral argument.** The transmission of moral and social values that will guide the future of our children begins in the earliest months of life. There is a strong incentive to strengthen such values in societies concerned with the rapid erosion of traditional values. Early child development programmes can assist in that effort by supporting parents and communities, thus providing environments that reinforce positive cultural values.

• **The social equity argument.** Stressful conditions that inhibit development in the early years affect the poor more than the rich, reinforcing social inequities. The negative outcomes of stressful environments are cumulative, and poor children fall quickly and progressively behind their more advantaged peers. Moreover, in many countries gender-linked disparities in patterns and practices of childrearing in the early years work against girls' development and educational opportunities. Early childhood development programs have the potential to help correct such discrepancies.

• **The economic argument.** Society benefits through increased productivity and cost savings associated with enhanced early child development. Preventive programs can produce savings by reducing the need for expensive curative health care; by improving the efficacy of education systems; by reducing the rate of drop-out and repetition; and by reducing the incidence of juvenile delinquency, drug and alcohol abuse, and other forms of harmful social behaviour.

• **The birth-spacing and population argument.** The link between fertility rates and education levels suggests that efforts to improve the educational level of girls and women will have a strong intergenerational effect on fertility. Early child development programmes, linked to parental education and increasing girls' school attendance, can play a role in promoting family planning and the decline of fertility rates.

• **The programmatic argument.** The effectiveness of health, nutrition, education, and income-generating programmes can be improved through integration with programmes of child development, thus taking advantage of the interactive effects among these variables. Moreover, child development programmes are often an important entry point for community development activities as well as an extension for primary health care services.

The force of these arguments is strengthened by the negative effects of worldwide economic recession and changing social conditions, including increasing child survival and the concomitant need to sustain and support these gains, increasing female participation in the labor force, rapid urbanization, and the erosion of stable family-units. When viewed collectively, these arguments provide a powerful basis for families, communities, governments, nongovernmental organizations, and international donor agencies to consider investing in early child development programmes.

The discussion that follows seeks to clarify the scientific basis in support of increased investments in well-conceived and properly managed early child development programmes.

Development From Conception to Birth

Human development is defined here as the sequence of changes that begins at the time of conception and continues throughout life. Conception as the starting point in this process is simply a convention. In fact,

each individual is but a product of the evolutionary history of the species, reflecting as it were, the development of culture and society. Through development, the entire history of our species plays a role in shaping the course of each new human life. In this view, development is propelled by the interaction between those forces that create order and structure and those that generate confusion and diversity. At the moment of conception, both the forces that create order and those that result in diversity come into play. Order, the way in which humans are alike, initially arises from the limitations imposed on the pool of genetic possibilities. Diversity, arising through sexual reproduction, seeks to ensure that each individual will inherit a unique combination of genes from the common pool.

At conception, the basic genetic material begins to interact with the surrounding environment, manifesting the conflicting processes that simultaneously create order and variation. Of all our existence, the nine-month period of gestation is the most eventful. At conception, life begins as a single cell, 1/175 of an inch in diameter, weighing approximately 15 millionths of a gram. At birth, a child consists of over 2 billion cells and weighs, on the average, 3,250 grams. The changes that occur in form are no less astounding than those that occur in size. The first few cells formed from the zygote* are all identical; in a matter of weeks a wide variety of cells will be intricately arranged in the structures of independent organs.

For many students of development, the prenatal period is viewed as a model that characterizes development throughout the life span since many of the principles used to explain development are first expressed during this period. For example,

• **Sequence is important.** There must be one cell before there are two, and muscles and bones must exist before nerves can coordinate movement.

• **Timing is important.** If the newly formed sex glands do not produce male hormones at seven weeks following conception, the development of female genitalia is irreversibly set. Thus, the existence of critical periods in the formation of basic organ systems is evident.

• **Development consists of differentiation and integration.** The single cell of the zygote multiplies into identical cells of the morula.† These cells then differentiate into two distinct kinds of cells, which are later integrated into a new configuration of cells.

• **The course of development implies stages.** Change and variation in the form of the organism and in the ways it interacts with its environment suggest that development is characterized by a series of stage-like transformations.

• **Development proceeds at an uneven pace.** From the earliest stage, the different subsystems that make up the human organism do not develop at the same rate.

• **The development course is characterized by regressions.** Although development generally progresses from less complex to more complex patterns, there are periods of regression. Regression often occurs during periods of reorganization just prior to the onset of more complex functioning.

• **Development is still mysteriously complex.** The complex process by which the human organism develops from a single cell to the human infant continues to mystify scientific understanding. At the same time that the genetic material constrains the outcome that can result, development is continuously sustained and propelled forward by new forms that emerge from the interaction of the organism with the environment.

Newborn Capacities and Patterns of Early Interaction

Following nine months of growth and maturation in utero, chemical changes initiate the birth process. The transition to life outside the mother fundamentally changes the conditions required for continued development. Birth constitutes the first of several major biological-behavioural shifts in development. No longer able to receive maternal sources of oxygen and nutrients to sustain life, the infant must rely on the biological capacities developed during the prenatal period. Thus repeats the process in which the biological forces during conception interact with the culturally organized environment that awaits the child at birth.

Contrary to common wisdom of earlier decades, modern research has demonstrated the remarkable abilities of infants to seek out and process information about their environment and to act on that information. It is increasingly recognized that infant survival is directly dependent on the social support of caregivers who respond to and structure, according to

*The single cell formed at conception by the union of the genetic materials of the sperm and ovum.

†A solid ball of cells that results from the cleavage of the zygote as it moves through the fallopian tube.

prescribed patterns, the infant's interaction with the environment.

At birth infants are equipped with a wide range of capacities that facilitate both survival and healthy development. They have reflexes for the basic biological functions as well as reflexes that lay the foundation for the more complex controlled behaviours that appear later on, such as grasping, crawling, and walking. Their basic sensory capacities for hearing, touching, smelling, and tasting are mature at birth, and the competence with which most newborns use these capacities is dramatic. For example, neonates are able to hear across the same frequency range as older children, and they display a special sensitivity to the basic sound categories of human language.[2] Although vision is not fully developed at birth, infants are able to focus and follow the human face as well as attractive inanimate objects.[3] By two months of age the infant's attention span increases, and more complex, shaded images are preferred. At birth, the dermal or touch system is the most mature of all the sensory capacities. The skin, the most extensive of all sensory systems, sends a multitude of sensory messages to the brain through its receptors for temperature, contact, and pain. In addition to body contact, taste and smell play an important role in the early establishment of emotional ties. Within the first week, infants are capable of distinguishing the mother's breast milk. Infants are attracted to what is familiar and express this comfort through bodily movements and facial expressions. A calm quiet infant is highly satisfying to the mother. The mother-infant communication system, which is initially established through touch and smell, occupies a critically important place in the development of emotional ties.[4] These early expressions of emotional ties lay the foundation for the emergence of more complex cognitive, social, and emotional development.[5] In the absence of human contact, infants will begin to withdraw from their environments.

Young infants are equipped with a repertoire of communication skills, including smiles, gestures, and vocalizations, which enable participation in a complex affective communication system. For example, an infants has several goals for interacting with other objects and maintaining close proximity to its caregiver.[6] To accomplish these goals, the infant processes information about its successes or failures and uses that information to accomplish their goals or to redirect his/her efforts to other goals. An infant can effectively signal its interests for interaction through eye gaze and smiles, and caregivers interpreting the infant's messages respond through appropriate facilitation of the infant's objectives. Thus the infant is an active, not a passive, participant.

Social interaction in the newborn and in the early months of infancy appears to be a rule-governed, goal-oriented system in which the infant and its caregiver are active participants. Disruptions of this system command powerful responses from the newborn. This has been dramatically illustrated by years of laboratory investigation of face-to-face interactions by Brazelton and his colleagues. In a face-to-face laboratory play situation, mothers were asked to violate the infant's expectations for interaction by remaining alert but unresponsive.[7] The still-faced mothers remained unresponsive for only three minutes, yet their infants found this temporary violation greatly disturbing. This suggests that reciprocity and mutual achievement of the goals of social interaction form a necessary basis for the growth of affective well-being in infancy. The strategies that infants employ to bring their mothers out of immobility demonstrates their growing confidence as an effective social partner. The seriousness of their reaction when the mother remained unresponsive demonstrates the infant's critical need for maternal responsivity. When infants are unable to pull their mothers into the interaction and finally withdraw, they are reminiscent of Harlow and Zimmerman's description of the withdrawn behaviour and huddled posture of isolated monkeys, and of Bowlby's description of the withdrawn behaviour of children separated from their caretakers.[8] Sick, malnourished, or brain-impaired babies as well as those infants expecting to fail will elicit less effective social interaction.[9]

Decades of research on infant behaviour, combined with a sensitive appreciation for the range of cross-cultural contexts in which the child's capacities unfold, has led Brazelton and his colleagues to develop a model for understanding the drama of child development during this early period.[10] An understanding of the forces that propel the child along the normal path of development, is critical to an understanding and prevention of failure. According to this model, there are three sources of energy for development, including central nervous system maturation, internal feedback system, and external feedback system (Figure 1).[11]

The first source of energy is the maturation of the central nervous system (CNS) which is at the same time the most powerful and most limiting force. The

growth and maturation of the central nervous system in early child development is dramatic and drives infants from one level of development to another in relentless fashion. Brain development is a process characterized by events that occur in a complex, interrelated way, in a dynamic fashion, at specific predetermined times. The brain attains 90 percent of its adult volume by 6 years of age, whereas the rest of the 6-year-old's body represents only 40 percent of adult volume. There are two periods of rapid brain growth. The first begins during the first three weeks of pregnancy, during the period of embryogenesis, when the nerves and glial cells are formed. The number of cells formed during this period remains stable throughout the life cycle. The lifetime brain potential acquired at that time is approximately 10 billion cells. The second phase of rapid brain growth lasts from the 13th week of gestation until 2.5 years. During this period many of the brain's structures and biochemical routes are developed, and a whole system of interconnections is established.[12]

The second important set of energies in early child development is the internal feedback system that provides the growing infant with a sense of inner competence. These internal programmes of development, reflecting both genetic endowment and intrauterine shaping, provide the maturational stages that are genetically programmed. For instance, when a toddler first learns to walk its face glows, its body struts and its legs are driven to perform for long, exhausting periods. The energy that has been mobilized to achieve the developmental task of walking now fuels the realization of mastery, and in turn, the infant is reinforced to move on to achieve the next developmental stage.

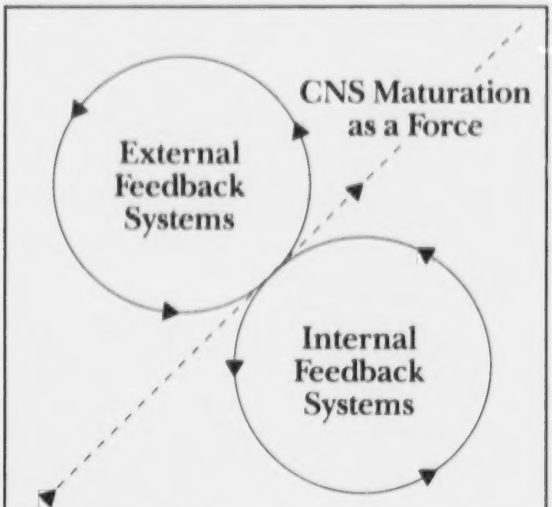

Figure 1 Three sources of energy for development

Source: Brazelton, T.B. (1987) Early intervention: what does it mean? Ingun zenhauser, (Ed.) Infant stimulation: for whom, what kind, when and how much?

The third source of energy propelling early child development is the external feedback system provided by the parents and the outside environment. For instance, as the infant achieves each new goal, it looks for signs of reward and reinforcement from the outside world. Thus, infants are programmed with the energy or drive to reach out for and incorporate cues and reinforcing signals from the social world, providing a second force for achieving an inner sense of competence. While the feedback cycles that are necessary for normal affective growth are well documented, we have only recently understood the crucial role of environmental nurturance for all of the infant's development. Environmental forces can work powerfully to retard or enhance the infant's progress.

A normal infant has sufficient amount of internal energy as well as mechanisms for demanding responses from caregivers. Malnourished infants, however, are unable to elicit appropriate responses from already overstressed, depleted caregivers. These infants' capacity for catch-up growth is limited, and the stage has been set to fuel the cycle of poverty.[13] In a malnourished infant, one with a premature CNS system and decreased amount of brain cells, where are the sources of energy? These infants expect to fail and before they have reached their first birthday they have already learned how to fail. How can one intervene early enough to interfere with this expectation for failure?

The design of early intervention initiatives for at-risk infants and their families requires the identification of critical periods or opportunities. These opportunities or "touchpoints" refer to "windows" when the infant-caregiver-environment system is particularly responsive and open to both receive and provide appropriate information. The esteemed French psychologist Jean Piaget first recognized that any developmental progression goes in a burst of energy, followed by a leveling off and a consolidation, and then another burst![1] This period of disorganization is what leaves the system open allowing the child, caregiver, and family receptive to establishing a relationship, as well as to receive and pass on new information.

Several early universal touchpoints have been recognized by Brazelton in his work with infants and families in both industrialized and non-industrialized countries. The first touchpoint occurs in the last trimester of pregnancy when parents and families seem to be universally receptive to information. A second touchpoint appears to be the early months of life when the universal language of the infant can be demonstrated to engage the caregiver's heightened commitment and capture the sense of hope which surrounds the birth of an infant. This hope, however fleeting, is available in even the most stressful and at-risk systems.

Two ingredients seem to be critical if early intervention is to result in improved developmental outcome. These include the timing of the intervention and its quality. Intervention must be of a kind that fosters the child's sense of competence and fuels his own internal coping strategies, and it must involve appropriate caregiver response to recognize, nurture and reinforce the child's development. Efforts at early intervention may prevent a compounding of problems that occur when the environment cannot properly respond. For example, premature infants are less able to compensate in disorganized, depriving environments than are well-equipped infants. Quiet, undemanding malnourished infants do not elicit necessary mothering from already overstressed parents.

It must be recognized, however, that in spite of desperate socioeconomic conditions characterizing the environments of many children in the developing world, families are able to produce children who do not have to be rescued from protein-energy malnutrition and other forms of abuse and neglect. Premature and growth-retarded babies do make remarkable recoveries when placed in supportive environments. Only through the careful appraisal of both the strengths and weaknesses of infants and their environments can we come to appreciate the mechanisms for failure and the sources of strength. Thus, an opportunity and a challenge is offered to practitioners and programmers to identify critical periods when early intervention strategies will be most effective. These touchpoints, when parents are ready to be empowered or children are about to conquer the next developmental task, must be socially and culturally determined. With insights grounded in the knowledge of child development as well as a realistic appraisal of available resources, each community of families must identify the timing as well as the content of the intervention.

The following section summarizes the normal developmental process beginning with a description of the infant from 3 months to 2 years of age and concludes with a discussion of the early childhood period from 2.5 to 6 years of age. This discussion, with its attention to developmental stages, attempts to provide the reader with a firmer foundation to build programs.

Developmental Achievements in the First Two Years

The period from 3 months to 12 months of age is characterized by increases in size and strength accompanied by increases in coordination and mobility. Sitting appears at about 5 to 6 months; crawling, at about 7 to 9 months; and walking, at about 1 year. During this period both memory and problem-solving abilities improve, providing infants with a firmer sense of their environment and their ability to act on it. Sometime between 7 and 9 months the infant's increased physical ability and intellectual power bring about changes in its social relations. During the period between 3 and 12 months there is a steady growth of memory. As a result of this cognitive capacity, infants become upset when left alone and are likely to be wary of strangers. Monitoring of caregiver's facial expressions helps them to evaluate their environment. They also begin to make their first speech-like sounds, which foreshadow the beginning of language.

At the same time that infants have increased motor capacity, they also show an increased capacity to understand basic properties of objects and spatial relations; they perceive different objects as members of the same category and compare present experiences with memories of past events. According to Piaget, development evolves from children's own efforts to master their environments. In this perspective, infants actively seek to assimilate their environmental experiences into their existing knowledge base, or schemas. When they are unable to do so, they accommodate their existing schemas to the environmental realities they encounter. Learning during infancy occurs by sensorimotor ways of knowing. Between 4 and 8 months they pay increased attention to external objects and prolong actions that produce interesting changes in their environment. Between 8 and 12 months they are able to coordinate separate actions to achieve goals.[15]

The combined data on the changes in a child's self-concept between the ages of 18 and 30 months is evidenced by children's declined distress at separation

from their caregivers and an increased ability to engage in symbolic play, to imitate absent events, and to express themselves in elementary words and phrases. The changes that converge to create the transition from infancy to early childhood are summarized in Table 1. As indicated in the table, these changes reflect what psychologists refer to as a "bio-social-behavioural shift".[16] This shift refers to a process by which changes in separate domains converge to create a qualitative reorganization in the overall pattern of behaviour, signaling the beginning of a new developmental stage. The accomplishments of this period remind us that social and cognitive changes are accompanied by changes in physical development, such as coordinated walking and bladder control, all of which are controlled by the continued maturation of the central nervous system.

When both the environment and internal growth processes are sufficient, the separate components of development undergo further modification, and a new distinct stage characterizes the child at 3 or 4 years. A new configuration of cognitive abilities is manifested in many domains, including problem solving, play, imitation, categorization of objects, and communication. Play evolves from a concentration on variations in patterns of movement to the pretend use of objects in imaginary situations. Pretend play itself evolves, and children can carry out a sequence of pretend actions in which objects are used as agents. Late in the second year, children become capable of imitating actions seen days earlier, a kind of behaviour known as deferred imitation.[17]

TABLE 1

THE BIO-SOCIAL-BEHAVIOURAL SHIFT AT THE END OF INFANCY

Biological Domain
Myelination of connections among brain areas
Leveling-off of brain growth
Roughly equal degrees of maturation of different brain areas
Behavioural Domain
Walking becomes well coordinated
Manual dexterity becomes adequate to pick up small objects
Control over bladder and bowels
Playful problem solving
Symbolic play
Deferred imitation
Conceptual representations
Elementary vocabulary and the beginning of word combinations
Social Domain
Decline of distress at separation
Distinctive sense of self

Cole, M. and Cole, S. (1989). *The development of children.*

The complexities and subtleties involved in accounting for how children develop are well known to those struggling to characterize and define the process. As confirmed by research, the contributions of biological and environmental factors as well as cultural influences and the specific circumstances in which infants and young children develop must all be considered. A child's behaviours develop not in isolation but as components of an integrated system. The requirement that developing systems must be studied as a whole is expressed with particular clarity by the embryologist C.H. Waddington: " A new level or organization cannot be accounted for in terms of the properties of its elementary units as they behave in isolation, but is accounted for if we add to these certain other properties which the units only exhibit in relation to each other."[18]

Malnutrition and the Brain

In many countries of the developing world, the environments confronting the young child are not able to support the magical unfolding of the child's potential. One of the most critical insults to early child development is inadequate nutrition. The functional and structural effects of malnutrition on the developing nervous system are known to impair cognition and behaviour and to magnify the adverse effects of socioenvironmental deprivation on development.[19] At any age, undernutrition need not be severe or prolonged to produce behavioural changes that may have important implications for both parent-child interaction and the ability of the child to explore and master the environment. In studies of infants and toddlers, iron deficiency, even without associated protein-energy deficits, correlates with lowered scores on tests of mental and motor developments, as well as with increased fearfulness, increased inattentiveness, and

decreased social responsiveness.[20] These developmental deficits may persist after the iron deficiency has been treated. Protein-energy malnutrition reduces playful and exploratory activity as well as motivation and arousal and increases apathy and irritability, even before anthropometric deficits occur.[21,22] The physiologic mechanisms of these behavioural derangements are not fully understood but may be related to alterations in neurotransmitter[c] synthesis and release.[23]

While undernutrition produces alterations of behaviour at any age, the brain is uniquely vulnerable to structural deficits during the critical period of rapid brain growth which extends from mid-gestation through the early preschool years. The growing brain utilizes nutrients at very rapid rates. Although it is only 2 to 3 percent of the child's body weight, it utilizes 60 percent of the body's glucose. During this critical period the brain has biosynthetic abilities which are inactive after early development making it impossible to generate new neurons after this critical period.[24]

The effects of nutrient deprivation on brain size and structure depend on the timing, duration, and severity of the nutritional deprivation in relation to the development of the brain. When the brain is deprived of an optimal supply of nutrients there are no discrete lesions. Rather, generalized distortion occurs in those areas that were maturing at the time of nutrient deficit. In other areas of the brain where the cells have differentiated during prenatal life, malnutrition in infancy reduces the formation of synapsis[d] and the branching of dendrites[e].[25] Nutritional intervention is a necessary but not a sufficient mode of treatment for infants suffering from early malnutrition. Data on children from both the developed and developing worlds clearly demonstrates that medical and nutritional intervention may restore physical growth but do not bring developmental functions back to normal.[26,27,28,29] However, several investigations from the developing world have indicated the plasticity of the infant's central nervous system when exposed to interventions that provide developmental stimulation in conjunction with nutritional and medical care. Malnourished children who received focused and sustained centre- or home-based developmental intervention beginning before 2 years of age and lasting for at least 3 years showed significantly improved developmental scores at follow-up when compared to untreated malnourished children.

In a study in Cali, Colombia, 180 chronically malnourished Colombian preschool children were divided into three groups of 60 children each.[30] Children in Groups I, II and III received medical care, while Groups II and III received nutritional intervention as well. Children in Group III, in addition to receiving medical and nutritional interventions were exposed to a developmental component consisting of four hours of activities designed to develop cognitive, language, and social abilities. The results of the study indicate that adequate medical care alone produced no changes in physical growth or intellectual development. Nutritional intervention was able to increase physical growth. The group of children who received a multicomponent set of services, including medical care, adequate food, and a stimulating environment, exhibited rates of physical and cognitive development similar to a well-nourished control group. Thus, while such studies often suffer from methodological flaws of greater and lesser magnitude, the overall body of data indicates that the malfunction and poor growth due to early malnutrition and environmental deprivation are reversible with interventions comprised of nutritional, medical, and developmental components. The implications of this research for the design of comprehensive programmes attending to a child's health, nutrition, and development cannot be underestimated.

In summary, infancy as a distinct period in the life span is recognized by all cultures. While infancy begins as soon as the child starts to breathe independently, the end of infancy is not so easily defined. According to the ancient Romans, an infant is "one who does not speak." Developmental psychologists, to establish that one stage has ended and another begun, look for converging changes in development among several spheres of physical, psychological, and social domains. For example, the acquisition of language is not an isolated event but is associated with children's social relations, self-concepts, modes of thought, and physical capacities. It is an ensemble of integrated change that transforms the infant into a young child who, though still dependent on adults, is on its way towards independence.

The behaviours that mark the end of infancy do not emerge all at once. Rather, they reflect the interplay among the patterned sequence of change in biological, behavioural, cultural, and social domains of development. As described earlier, the first few

[c] Chemical substance active in the transmission of nervous impulses.

[d] The junction between nerve cells or between nerve cells and other categories of cells. Some synapses are electric, others are chemical and make use of neurotransmitters.

[e] The multiple processes that conduct impulses towards the body of a nerve cell.

months of life provide insights into the processes of developmental change when the major task is to develop a synchronous pattern of interaction between the infant, its caregiver, and the environment. This system of mutual reciprocity is achieved through a wide range of different cultural systems of childrearing patterns and practices that respect, respond to, and support the infant's intense drive to learn through interactions with the environment. During the first two years of life, in supportive physical and social
environments, the development of critical brain structures continues to fuel behavioural changes that enhance the child's abilities to learn from and shape its interactions with caregivers and the environment.

Paradoxes of the Preschool Mind

Developmental change evolves more slowly in early childhood (the period from 2.5 to 6 years of age) than in infancy. During this time, children lose their baby fat, their legs grow longer and thinner, and they move around the world with increasing dexterity. They present a bewildering patchwork of vulnerability and ability, logic and magic, insight and ignorance. Children at this age can talk in endless sentences but are keen listeners when an interesting story is being told. Their present desires can be curtailed with promises of later rewards, but they may not necessarily accept the offered terms, negotiating for an immediate as well as a delayed reward. They develop theories about everything that are constantly measured against the world around them. However, despite their developing independence, 3-year-olds need assistance from adults and siblings. They cannot hold a pencil properly or string a loom or tie a knot. They do not have the ability to concentrate for long periods of time without a great deal of support, and they wander on tangents in their games and conversations. Preschool children's thought processes are characterized by great awareness; yet, these islands of sophistication exist in a sea of uncertainty. Children during this period, still understand relatively little about the world in which they live and have little or no control over it. They are prone to fears and they combat their growing self-awareness of being small by wishful, magical thinking[1].

A dramatic accomplishment during this period is the acquisition of language. Despite intensive investigation, the process of language acquisition remains elusive, and no one theory has sufficiently uncovered its mystery. What is evident is that the growth of children's vocabulary and their increased ability to use complex sentence structures accompanied by a corresponding growth in their ability to engage in conversation appropriately tailored to the listener's needs, requires both participation in responsive human interactions and exposure to a rich language environment.[31]

For decades, Piaget's descriptions of young children's thinking dominated exploration of the preschooler's mental development. According to Piaget, children's language acquisition reflects their emerging capacity for representational thought. The ways in which children think about the world, however, are still primitive--dreams come from street lamps, we think with our ears, clouds are alive, and the sun follows us when we move. Piaget proposed that 3-, 4-, and 5-year old children make errors because they are still unable to engage in true mental operations. This type of thinking therefore was termed "preoperational." According to Piaget, the key feature of preschool thinking is that children can only focus their attention on one salient aspect at a time. This limitation is overcome at 6 or 7 years of age, when the transition to concrete operational thinking emerges. When this occurs, children are able to combine, separate, and transform information mentally in a logical manner. They know that the sun does not follow them and dreams do not come from street lamps.

Piaget's perspective on the preschool child's development places the child at the centre of his universe. Through active interaction, exploration, and observation of the environment, the child actively creates his own learning. During development, the child's ability to engage in play undergoes important transformations reflecting and promoting levels of cognitive, motor, and social capacities. For example, the infant requires adult "scaffolding" of activities, the 2- to 4-year-old engages in solitary play while 4-to 6-year-olds have tremendous capacities for sociodramatic make-believe games that involve other children and enactment of a variety of social roles. Play facilitates the transition to higher levels of cognitive development; the "as if" nature of play allows children to perform actions that are more developmentally advanced than those they can realistically achieve. Play fosters a sense of self-esteem and competence, supporting and reinforcing the child's capacity for effective action. As a consequence, in play a child is always above his daily behaviour; in play "it is as though he were a head taller than himself."[32]

In the past decade, Piaget's work has been chal-

lenged for its failure to account for the variation in preschool childrens' thinking. For some, the unevenness can be explained by differences in childrens' familiarity with specific task settings. Biologically oriented theorists argue that changes in the brain's structure are the major cause of unevenness in preschool thought. At the start of the preschool period, the brain has achieved 50 percent of its adult weight. By the age of 6, the brain will have grown to 90 percent of its weight. Within this overall process of growth, myelination—the process by which neurons become covered by myelin, which is a sheath of fatty cells that stabilizes the neurons—appears to play a particularly important role in preschoolers' cognitive development.[33]

In light of these varying perspectives, the position most reasonable to accept, however, is that the context-specific organization of the child's environment is constantly interacting with the biological properties of the child, which themselves develop at different rates. Appreciating the immense variation of these two diverse sources, one from the social world of human existence and one from biology, we can begin to understand the range and variability in early child behaviour. In this ecological view of development, the child's environment consists of four interrelated layers including the nuclear and extended family; the immediate community of peers and neighbours; the institutional community of schools and other social service facilities; and a cultural ethos consisting of values, beliefs, and rituals. The child's development is conditioned by the frequency and complexity of interactions within each one of these systems. For example, cognitive and social development seem to be most affected by factors of the home environment, including the caregivers' self-image, self-esteem, confidence, and emotional responsivity; the restrictions and types of discipline imposed on the child; the language stimulation provided; and the child's opportunities for exploratory play and appropriate play materials. Factors in the immediate community impacting on the child's development may consist of community attitudes, beliefs, and perceptions regarding the ideal child and childrearing patterns that foster such development.[34]

Until recently, emphasis was placed on identifying and overcoming deficiencies of the "deprived" environments that characterized the rural and urban poor. Disadvantaged environments have been thought to lack the necessary variety and quality of human interactions as well as the necessary objects and events for fostering a child's early development. Poor quality verbal interaction and absence of toys and were frequently cited as detrimental to a child's language abilities and visual-discrimination. More recently, however, the strengths of the environments characterizing the poor which are capable of fostering and promoting early development have been appreciated. Such features include, for example,

- Opportunities for play with peers and older children with minimal adult interference enhancing the development of self-reliance, self-control, cooperation, empathy and a sense of belonging
- Exposure to multiple teaching styles, with emphasis on modeling, observation, and imitation
- Presence of a rich cultural tradition of games, toys, songs, and stories that provide a culture-specific context for language acquisition.

Realization is growing that within so-called deprived environments, children learn a different set of skills that are functional in their home environments but that may not be valued by formal institutions such as the school system. In the design of culturally appropriate, community-based early intervention programmes, it is critical therefore, to explore, mobilize, and build on these inherent strengths. The recognition of strengths within "deprived" environments sheds light on the factors giving rise to "invulnerable," or stress-resistant, children.[35]

Past investigations that focused only on vulnerabilities and sources of failure prevented an understanding of the ways in which protective mechanisms shield children from risk. In the past decade, efforts to understand "invulnerable" children have begun. Garmezey has proposed three categories of protective factors, which include (1) personality characteristics of the child; (2) a supportive, stable, and cohesive family unit; and (3) external support systems that enhance coping skills and project positive values.[36]

Recently, investigators have identified the child's "sense of self" as a key determinant of successful outcomes.[37,38] It is suggested that children with positive feelings of self-esteem, mastery, and control can more easily negotiate stressful experiences. These children in turn elicit more positive experiences from their environment. They show initiative in task accomplishment and relationship formation. Even in stressed families, the presence of one good relationship with a parent reduces psychosocial risk for children. For

older children, the presence of a close, enduring relationship with an external support figure may likewise provide a protective function. A child with a positive self-concept seeks, establishes, and maintains the kinds of supportive relationships and experiences that promote successful outcomes. These successes enhance the child's self-esteem and sense of mastery, which leads to further positive experiences and relationships. The cycle of success can be as self-perpetuating as the cycle of failure.

In spite of these strengths, it is clear that the developmental costs of poverty are high and that poverty is a marker for potential psychosocial risk factors. Children in poverty are exposed more frequently to a clustering of such risk factors as medical illness, poor nutrition, family stress, low education levels, inadequate social-service support, and nonstimulating social environments. The costs can be measured in terms of school drop-out, unemployment, delinquency, and the intergenerational perpetuation of failure and poverty.

These stress factors additionally or "synergistically" interact with the child's inherent strengths and vulnerabilities to shape outcomes. A transactional model developed by Sameroff and Chandler has become widely used to help define developmental outcomes.[9] According to this framework, child outcomes can only be interpreted by considering the transaction between the content of the child's behaviour and the context in which the behaviours are manifested. Characteristics of the child shape its response to the environment. These interactions in turn transform environmental responsivity. Just as the child is shaped by the environment, so is the environment modified by the child. The child brings a host of attributes to the interaction, including: health and nutritional status; temperament; and cognitive, language, and social skills. The environment in turn brings specific attributes. In an environment of poverty, more risk factors are likely to be present. While adding considerable complexity to the determinates of child outcomes, such a model also suggests an opportunity for practical intervention strategies. Change in any aspect of the child's differing environments can create positive transformations in another.

The period of early childhood ends at the age of 6 or 7 years, when children pass through the next bio-behavioural shift and assume the accompanying social roles and demands. Generally by this age, children's brains have achieved a level of complexity similar to adults. It is the age of formal schooling, and children also gather with friends and peers beyond the family. Developments in early childhood provide the essential preparation for the new demands and opportunities to come.

In bringing this theoretical discussion to a close, it is perhaps useful to conclude with the insight of a proverb, "As the twig is bent, so grows the tree." If forces in the environment bend a sapling long enough, the tree may become so bent that its leaves cannot receive the sun's light, and it will not flower and reproduce. Yet, if the forces bending the tree cease or if a gardener stakes the tree upright, the only lasting effect may be a slight bend in the trunk. The tree will prosper and make a genuine contribution to its environment.[1]

The following section reviews the seminar discussion of strategies and policies designed to address the difficult poverty-related and other realities early child development programmes must confront.

PROGRAMME POLICIES, STRATEGIES, AND REALITIES

A Typology of Complementary Programming Options

The development of the child is promoted by a continuous interactive process between the developing child and the people and objects in a constantly changing environment. That changing environment includes the immediate context of the family and the community as well as a larger social political and economic context with attendant institutions, laws, policies, and norms, and a culture providing values, rituals, and beliefs. These considerations have lead to a set of five complementary programme approaches including:[10]

1. **Attending children directly.** The immediate goal of this direct approach is to enhance child development by attending to the immediate needs of children in centres organized outside the home. These are, in a sense, "substitute" or "alternative" environments to the home.

2. **Supporting and educating caregivers.** This approach is intended to educate and "empower" parents and alternative caregivers in ways that improve their care and interaction with the child and enrich the immediate environment.

3. **Promoting community development.** This strategy stresses community initiative, organization, and participation in a range of interrelated activities, to improve the physical environment, the knowledge and practices of community members, and the organizational base allowing common action and improving the base for political and social negotiations.

4. **Strengthening institutional resources and capacities.** The institutions responsible for implementing programs require financial, material and human resources with a capacity for the planning, organization, and implementation of innovative techniques and models.

5. **Strengthening demand and awareness.** This programme approach concentrates on the production and distribution of knowledge in order to create awareness and demand. It may function at the level of policy makers and planners, or can be directed to the public by changing the cultural environment that affects child development.

Although all five of the approaches are intended to enhance early childhood development, each has different immediate objectives and is directed towards a different audience or group of participants. Table 2 summarizes the beneficiaries, objectives, and illustrative models for each approach.

Any overall plan for enhancing child development must pay attention to all five of the approaches distinguished here. The emphases to be given within the overall strategy will, of course, vary considerably, depending on the conditions of the setting in which the programme is being developed. In spite of various approaches, the main goal of child development programmes is to enhance the competence of children to adjust to, perform in, and transform their own surroundings. In some cultures this means greater emphasis on independence; in others, greater emphasis on group solidarity. The ultimate outcome for all programmes, however, is to enhance the child's physical, intellectual, and social development.

In attempting to reach the goals set for early child development programmes, UNICEF has put forth several guidelines which will help to ensure programme effectiveness. These include the following:

- Priority should be given to families and communities in which children are at-risk of delayed or debilitated development.
- Programmes should form part of a comprehensive, multifaceted strategy.
- Programmes should be participatory community-based, flexible, and adjusted to different sociocultural contexts.
- Programmes should support and build on local customs and traditions that have been devised to cope effectively with problems of child care and development.
- Programmes should be cost-effective, financially feasible, and sustainable over time.
- Programmes should try to reach the largest possible number of at-risk children.

A comprehensive programming framework is required to help overcome the piecemeal approach that has unfortunately dominated the field in the past. A broad framework helps to locate specific initiatives and focus attention on missing components. A programming framework presented during the seminar consisted of three dimensions.[11] The first dimension is defined by the five complementary approaches attending respectively, to the child, the family, the community, social institutions, and culture or ideology. The second dimension is derived from the UNICEF guidelines, which dictate that programmes

TABLE 2

PROGRAMMING FOR CHILD DEVELOPMENT:
COMPLEMENTARY APPROACHES AND MODELS

Programme Approach	Participants/ Beneficiaries	Objectives	Models
Deliver a service	The Child • 0–2 years • 3–6 years • 0–6 years	• Survival • Comprehensive development • Socialization • Rehabilitation • Improvement of child care	• Home day care • Integrated child development centres • "Add-on" centres • Work-place • Preschools: formal/ non-formal
Educate caregivers	• Parent, family • Sibling(s) • Public	• Create awareness • Change attitudes • Improve/change practices	• Home visiting • Parental education • CHILD-to-Child programmes • Mass Media
Promote community development	Community • Leaders • Promoters • Members	• Create awareness • Mobilize for action • Change conditions	• Technical mobilization • Social mobilization
Strengthen national resources, capabilities	Programme personnel • Professionals • Para-professionals	• Create Awareness • Improve Skills • Increase material	• Tranining • Experimental, demonstration projects • Strengthening infrastructure
Advocate child development programmes	• Policymakers • Public • Professionals	• Create awareness • Build political will • Increase demand • Change attitudes	• Social marketing • Ethos creation • Knowledge dissemination

should seek to be integrated, participatory, cost-effective, and extended over as wide a population of at-risk children as possible. The third dimension is derived from the constant and changing nature of the early childhood development process, which begins prenatally and extends through the 6th year of life. Since points along this process require different approaches, a comprehensive child development strategy should respond to the changing needs of the developing child. Responsibility for programmes directed towards the survival and development of the child under 2 years of age often falls to the health sector or to organizations concerned with family welfare. Child development programmes aimed at those over 2 years of age are more likely to be associated with education and preschools. While this division is logical in the sense that survival and the early months of development are closely tied to the biological growth and maturation of the child, it masks the need for continuous integrated attention and reinforces the tendency to think that child development programmes are only relevant to children after age 3.

Thus, to counteract the tendency to restrict pro-

gramming for child development to a particular age group and to emphasize the simultaneous character of survival, growth, and development, this three-dimensional framework makes explicit the need for programmes to cover the prenatal period, the period from birth to weaning, the toddler period, and the early childhood period which extends from approximately age 3 to age 6 and includes the critical transition from home to school.

Innovative programming efforts incorporating the three dimensions suggested by this framework are numerous. As reflected by the participants' reports of ongoing activities, UNICEF programmes and those of its collaborating organizations have contributed to this mix of complementary strategies. For example, UNICEF is continuing its efforts to establish close linkages between child survival and development programmes. In many instances, these linkages are made by incorporating child development activities into existing health and nutrition activities. In other instances, UNICEF has supported the development of curricula, model training courses, and supplementary teaching materials as well as strategies to stimulate the dissemination of these materials. These programmes hope to attract large numbers of children, with particular emphasis on children under 2 years of age. In Chile, for example, UNICEF is collaborating with the Ministry of Education to develop low-cost nutrition and language centres that use community workers to reach mothers. Several examples of home-based programmes of parental education are functioning in Ethiopia, India, and Thailand. Another strategy is reflected in the support of child development activities into Child-to-child programmes. In other cases, including Ecuador and Nepal, child development programmes have been integrated into women's income-generating activities, thus responding to the intersecting needs for women's work and child care.

The seminar participants' summary presentations of current child development activities were followed by a more in-depth appraisal of programmes in five countries: India, Benin, Nepal, Colombia, and Kenya. This section of the report includes a summary of each of these programmes. Placing the programme within the sociocultural environment, each case study reviews issues related to programme design, management and operation, monitoring, evaluation, and expansion. Two of the five case studies, the home-based project in Nepal[42] and the centre-based project in Benin,[43] address the barriers encountered by small-scale innovative programmes attempting to increase coverage. The case study from Kenya[44] describes how a process of measured growth and a slowly expanding infrastructure, combined with a well-conceived curriculum and a decentralized training programme can sustain a high-quality centre-based preschool system. The case studies from Colombia[45] and India,[46] indicate that a strong political commitment and a recognition of the critical importance of providing comprehensive services to children have resulted in large-scale efforts to reach impressive numbers of children in need of services.

From the preschool centre in Benin to the hills of Nepal, these five case studies identified the hopes and challenges as well as the frustrations and constraints involved in programme implementation. Using the insights so generated, week three of the seminar consisted of detailed discussions of major programming issues in the design, implementation, and evaluation of child development programmes in the developing world. The following section addresses these issues.

Critical Issues In Programme Implementation

Increasing Programme Coverage

One of the major issues raised by the case studies and subsequent discussions is the need to respond to the rapidly growing interest in high-quality and affordable early child development programmes that can reach a significant number of children and families. As planners and practitioners become increasingly frustrated with small-scale or pilot projects that have failed to have an impact on policy and programming despite successful outcomes, the need to understand the underlying mechanisms for mounting large-scale efforts is critical.

While the problems associated with the process of programme expansion are varied and complex, they can be classified into four general categories including (1) lack of adequate resources; (2) absence of political will; (3) weak demand for services; and (4) inefficient organization, implementation, and management systems. Child development activities often suffer from unusually difficult constraints. For example, child development projects and programmes vary widely, depending on social and economic conditions, the mix of programme components, the age group involved, the institutional structure for planning and implementation, the degree of community involvement, and the methods used to deliver the programme. Programme expansion will be vastly different if a programme focusses on physical development and on immunization in a small country with a rela-

tively high literacy rate than if it attempts to build a sustained, community-based service including health, nutrition, and psychosocial components in a large country with a relatively low literacy rate. Thus, there is no one formula for programming that is equally applicable in all locations. An additional set of constraints in programme expansion stems from the fact that child development programmes, particularly those focusing on the child under 2 years of age, do not require large investments in institutionalized structures and are therefore less attractive to politicians than building large-scale social service institutions. Moreover, attention to the integrated needs of children crosses bureaucratic lines rendering no one institution with specific programmatic responsibility or commitment.

More difficult than citing reasons for failure however, is the systematic identification of components that account for a programme's successful efforts to move to scale. Far too little energy has been devoted to documenting solutions to the organizational, administrative, financial, and management problems projects face as coverage rates are increased.[17] Insights into the process of programme expansion, nevertheless, are accumulating. Three strategies for achieving scale have been distinguished: expansion, explosion, and association.[18] Scale through expansion begins with one model being tested, adjusted, and then extended to other locations until the desired coverage has been achieved. Expansion entails a "learning process approach" in which programme development proceeds through three distinct stages. In the first stage, the major concern is learning to be effective, while in the second stage, energy is focused on learning to be efficient. The third stage is concerned with expanding the organizational infrastructure needed to carry out the programme objectives. In this model, the rate of expansion is governed largely by the availability of organizational and institutional support. The International Child Development Services from India(see p.15)is an example of a programme that has achieved scale by expansion.

By way of contrast, increasing coverage through explosion circumvents the pilot stage and implementation starts on a large scale usually with one model serving many distinct geographic and cultural groups. This approach is usually the outcome of a national political decision that is often motivated by politicians' desire to attract broad political support. An example of the explosion approach is the Bienestar programme in Colombia (see p.17) in which the same model is applied to all parts of the country, and maximum coverage in the shortest period of time is the primary objective.

In an association model, programme coverage is accomplished by independently initiated or coordinated but distinct small-scale projects, each of which responds to the needs of a given target population. In countries characterized by a loose confederation of distinct cultural groups, achieving a large-scale programme by association may be desirable, since it allows each programme to respond and adjust to the particular needs of a homogeneous target group.

While such conceptual distinctions may blur in practice, analyzing these three approaches is useful because it forces planners to consider the various elements and preconditions involved in the complex process of expanding programme coverage. Interest in child development programmes is growing, simple technologies are underway, and a wide range of alternative delivery systems are being implemented. The systematic appraisal of present initiatives provides a critical opportunity to plan for expansion, and in the process, it raises the consciousness of both national governments and international organizations.

Any discussion of expanding the coverage rates of early child development programmes necessarily raises a number of related issues, including analyzing costs and financing, creating political will, utilizing the media, achieving quality control, training personnel, and programme monitoring and evaluation. The following section reviews the speakers' presentations and subsequent discussions on these topics.

Analyzing Costs

The prospects for expanding the coverage of early child development programmes are determined to a large degree by the availability of financial resources. This brief discussion, while not attempting to unravel the complex web of issues, underscores the need to focus on the costs involved in the provision of early child development services. Cost analysis is often a particularly weak element of ECD policy analyses and programme evaluations.

It is no surprise that in these economically volatile times there is no easy answer to how to mobilize resources for early child development activities. The field of early child development is particularly vulnerable to the economic and political forces at play, since children do not wield any political power. Moreover, the services included in early child development programmes cross many bureaucratic lines, and no one

INDIA

Integrated Child Development Services

The Integrated Child Development Services (ICDS), the largest program of its kind, underscores the power of political commitment to achieve significant rates of coverage for children in need of services. Beginning in 1975 with 33 experimental projects, the programme has grown to over 2,000 projects reaching approximately 11.2 million children under 6 years of age. Creating, maintaining, and expanding the programme has been an extraordinary achievement.

The overall goals of the ICDS scheme are to provide, directly or by coordination, a comprehensive range of basic services to children in an integrated manner; to create a mechanism at the village level through which the services could be delivered; and to give priority to India's low-income groups, including the underprivileged tribes and the scheduled castes. Specific beneficiaries include expectant and nursing mothers, other women aged 15–45 years, and children 0-6 years of age.

The specific objectives of the ICDS are to
- Improve the nutritional and health status of children between the ages of 0 and 6 years
- Lay the foundations for the psychological, physical, and social development of the child
- Reduce the incidence of mortality, morbidity, malnutrition, and school drop-out
- Achieve effective coordination of policy and implementation among the various agencies and departments involved in child development
- Enhance the capability of mothers to look after the health and nutritional needs of the child

The integrated package of ICDS services is provided through a network of Aganwadi Centres. Each Aganwadi Centre is run by an Aganwadi Worker (AW) and a helper. The responsibilities of the AW include informal preschool education, supplementary feeding, health and nutrition education, parenting education through home visiting, community support and participation, and primary maternal and child health care. Supportive supervision and guidance is provided to the Aganwadi Worker by a supervisor, and a full-time Child Development Project Officer (CDPO) is directly responsible for the implementation and management of each ICDS project.

The ICDS programme is a multidepartmental and intersectoral endeavour and as such, utilizes the existing services of governmental departments and voluntary organizations. The annual cost per child in an ICDS project is estimated at Rs. 115 (approximately US $10). The overall financial administration of the programme lies with the Department of Women and Child Development, Ministry of Human Resource Development. Recognizing the importance of training, the ministry has developed training protocols for the successful delivery of the ICDS package of services. The Aganwadi is selected from the local village and undergoes a three-month intensive residential training course. At present there are over 300 AW Training Centres run by a range of voluntary and governmental agencies throughout the country.

After more than a decade of experience characterized by rapid expansion of services, the constraints inhibiting the programme's optimal functioning are fully recognized. The major areas requiring further attention include innovative strategies to reach mothers and children under the age of 3, enhanced programme integration at the operational level, increased community and parent participation, and the need to maintain quality in spite of rapid growth and inadequate financial resources.

There is every reason to expect that the ICDS program will continue to expand at a rapid rate, eventually achieving full, or nearly full, coverage of its target groups by the end of the century. Given the demands of this pace, however, there is also every reason to expect that challenges regarding integration, management, quality, community participation, and coverage will persist. These constraints are fully recognized, and improvements are both feasible and likely to occur.

sector is held responsible, which diffuses prospects for both financial and political support. The processes by which financial decisions are reached by donors, governments, and nongovernmental organizations must be more deeply understood.

Unfortunately, by most economic forecasts, magical sources of revenue are not likely to be discovered, and it is incumbent upon us all to look widely for alternative sources. At the level of the family, for example, there is a need to consider not only economic contributions but also time contributions by mothers, fathers, and other caregivers in the provision of children's health, nutrition, and education services. At the level of the community, potential sources of revenue include the contribution of space, facilities, and provision for safety and maintenance. Often untapped is the potential energy behind community solidarity efforts including family support networking and promotion of traditional childrearing patterns and practices. These less formal variables, while difficult to measure, need to be considered simultaneously with real resources at the household level. One must consider, however, the degree to which these cost-sharing mechanisms are feasible, given the growing demand for early preventive approaches and the need to increase the quality of services.

In creating resources committed to financing early child development programmes, nongovernmental agencies are critical players and sometimes potential funders of recurrent costs. The role of international donors also needs to be reoriented towards a more flexible, sustained, action-based capacity-building style of assistance, which most donors are ill equipped to provide. Collaboration among nongovernmental organizations and international assistance agencies is required in response to different financial requirements at different levels of project development. For example, nongovernmental organizations might play an important role in defining effective implementation strategies, larger funders such as UNICEF could support programmes in the process of becoming more efficient, and the World Bank and other large donors might enter the process as programmes struggle to expand. Such collaboration among agencies at different stages of programme development could allow the various organizations to contribute in a cumulative fashion to the process.

Finally, public and private sector commitment must be re-energized. Economists have elaborately illustrated the play of forces affecting the availability of public sector revenue for child care and development, including the national economic rate of growth, inflation rates, competing demands of politically powerful sectors, and the diversity and elasticity of early child development revenues in relation to changes in the national economy. Moreover, the availability of public sector revenue for early child development is conditioned by a host of politically volatile and sensitive international economic relationships.

In the search for financial partners, the need for clear and understandable cost analysis becomes ever more critical. Initial assumptions about costs are often overly optimistic and underestimate costs associated with the provision of integrated child development services. Very rarely are attempts made to measure any benefits beyond a "head count" of beneficiaries. Awareness of costs and benefits should be increased at every level of programme planning. The main objectives of the proposed cost analysis are to determine

- Costs associated with expansion and sustainability
- Relationship of costs to benefits, as compared with other possibilities for resource allocation
- Potential opportunities for cost reduction
- Ways to enhance programme efficiency
- Possibilities for alternative sources of revenue

Effective cost analysis must determine various programming costs, including national or subnational, community, and external cooperation. Additionally, important funding decisions are based on a clear distinction between capital and recurrent costs. External cooperation is more available for capital costs, while recurrent costs are most often met by parents, communities, governments and nongovernmental agencies. The effective application of cost analysis may help to de-mystify the unknown costs associated with early child development programmes.[9]

Creating Political Will

An overall strategy for early child development must include attention to the political and social commitment needed to create demand and sustain services. Support must be obtained from politicians and policymakers, since they have the power to make budgetary decisions affecting the rate and process of programme expansion; from bureaucrats, who must be convinced of the value of child development strategies to ensure sustainability; and from professionals, who must be encouraged to improve quality through

COLOMBIA

Hogares de Bienestar: A Home-Based Approach

According to the latest census, 17 percent of the population consists of children under 7 years of age. Of these five million children, many suffer from malnutrition and are without the minimum requirements for adequate growth and development. In responding to the needs of this vulnerable group, the government developed a system of Hogares de Bienestar, literally "Homes of Well-being," under the coordination of the Instituto Colombiano de Bienestar Familiar. The program promises to go to scale to reach Colombia's 1.5 million malnourished children from birth to age 7 by 1992. At its present level of operation, approximately 394,000 children, 27 percent of the 1992 goal, are receiving services.

Unlike many existing services, the programme is based in the community, which is responsible for the local organization and management of the project. The objective of this initiative is to provide care for children in homes located within their own neighborhoods. The community determines the number of homes necessary to meet the needs of the children under the age of 7. Through government and private financing, funds are provided to upgrade neighborhood homes and provide training for mothers. The programme includes a balanced diet as well as attention to the conditions necessary to foster children's healthy physical, psychological, and social development. In addition, the programme gives the community a sense of control over social and economic development.

The programme begins with an analysis of the community's need for services, taking into account children's age, family income, maternal occupation, and physical and environmental variables. Once the children are identified, the community appoints mothers to implement the programme. The appointed mothers are instructed in the care and development of children as well as family and community relationships, nutrition, and health. Once trained, each of the community mothers cares for approximately 15 children between the ages of 2 and 7 years in her own home. Each child is given a "scholarship" by the government, which constitutes the income for the community mother.

The programme is managed by the community through a board consisting of parents, who are responsible for purchases and payments to the community mothers. Through the application of modern management systems, the programme is coordinated by the ICBF with additional responsibilities shared with the Ministry of Public Health , the national service for vocational training, and other government and private organizations.

the application of innovative techniques. In addition, if the programme delivered is to be accepted and sustained it is important to capture the popular will of the community. To create demand and achieve the support of these groups, a comprehensive and convincing rationale for investing in child development programmes, tailored specifically to the needs of the audience, must be established. Government officials must be convinced by a strong database that documents the positive benefits to programme participants. In addition, an advocacy campaign must be firmly grounded within an overall strategic plan that includes a clear sense of objectives, implementation strategies, and expected outcomes.

Successful advocacy campaigns require a careful analysis of the recipient audience. They must be based on a sensitive understanding of traditional beliefs and modern desires and of the social and economic realities determining the achievability of these aspirations. Identifying effective advocacy strategies involves using an array of qualitative data collection techniques, assessing social organizations and the formal and informal decision-making processes and understanding national, regional, and community administrative structures responsible for programme implementation.

The particular mode of communication, the

choice of content, and the form of presentation are dependent on the perceptions and perspectives of potential communicators and their audiences, including political leaders; civil servants; university and professional groups; community organizations and movements; nongovernmental organizations; newspapers, radio, and television editors; teachers; religious groups; and artists and intellectuals. Such an assessment identifies potential allies and collaborators as well as those whose collaboration may be detrimental to the achievement of the programme objectives.

A particularly disturbing outcome of successful advocacy campaigns occurs when the "supply side" is unable to meet the expectations or deliver the services created by the demand. Government promises made in part to stir enthusiasm, mobilize demand, and spur action bring with them a responsibility to mount the sustained operations necessary to accomplish the proposed objectives. If that does not occur, successful and inspiring communication efforts can be interpreted as hollow public relations ploys—a situation all too familiar to expectant recipients.

Role of Media in Promoting Early Child Development

UNICEF's expertise in focusing national and international attention on children's survival needs should be applicable as well to the area of child development. Important to consider are the ways in which survival and development efforts could be mutually strengthened by simultaneous consideration through selected media channels. In using media to create political will, one could consider, for example, developing a documentary that features child development as a global issue and includes such topics as these:

- Country-specific rationale for child development policies and programmes
- Forms of developmental stimulation techniques easily provided by parents and other caregivers with emphases on both the societal need for such activities and the possible benefits to children
- Effective innovative service delivery models that could focus on either organizational models or the work of individuals, including local or national advocates
- Traditional childrearing practices and patterns known to foster development, as well as those considered to have a negative impact on the developmental process

In addition to political will and national awareness being created by the use of media techniques, caregiver education can also be enhanced through the careful selection and use of appropriate media channels as well as content and format. Attributes of successful media applications with caregivers as the primary audience include a focus on local needs and the presentation of appropriate and available solutions in a compelling, practical, and demystifying fashion.[50] For example, an audience self-test for radio or television could incorporate brief features on child development, expanding on or explaining issues raised by a set of questions. A series of radio or television vignettes could be developed illustrating children's developmental progress. Each vignette could focus on the range of normal development, the identification of potential problems and a presentation of activities designed to foster development. An alternative strategy could be to design TV or radio programmes encouraging the use of traditional as well as modern patterns of childrearing. It is firmly established, however, that applications of media techniques to educate caregivers will only be successful if audience involvement is maximized through both on-air techniques and related follow-up activities. Creative experimentation and field trials are required in the design of effective interactive media that encourages active viewer or listener involvement.

Programme developers must also be aware of the increasing potential of media techniques designed to directly enhance children's development. Using television as a medium, *Sesame Street*,[51] developed by the Children's Television Workshop in the United States, is one example of a technique whose successful adaptation to countries in the developing world is dependent in part on the application of a carefully conceived curriculum that is not only respected by parents but is able to attract and sustain the active attention of the preschool child. Ideally programmes should be flexibly designed in order to respond to the developmental needs of performing at a range of developmental levels.

Achieving Quality Control

While it is accepted that high-quality child care programmes do positively affect development, a more complex concern is the potential for negative impacts of poor quality programmes on a child's development.

NEPAL

Project Entry Point

Project Entry Point is unusual for its joint attention to the intersecting needs of women's work and child care. Women and children in Nepal, which lies wedged between India and China, live in a land of great diversity . Its population is approximately 18 million, of which 8 million are children under the age of 15. Economic improvements are largely offset by a high population growth rate, with 42 percent living below poverty. An infant mortality rate of 119 is indicative of the poor nutritional status of those who survive. Women play a major economic role in the sustenance of small-scale agriculture, which produces almost 80 percent of the average annual income. In addition to these activities, Nepalese women are engaged in a full range of other informal income- generating activities.

In response to mounting economic needs, the government initiated a Production Credit for Rural Women Scheme Within the Ministry of Panchayat and Local Development. The goal was to support the establishment of interlinked credit and community development activities. The main objective was to free women's time for economic activities. Other community concerns included health, water, nutrition, and literacy. With the project's success, the need for child care became obvious.

In response to this need, a home-based program providing nutrition, health, and development activities to groups of 5 or 6 children between the ages of 1 and 3 is currently in operation. Mothers organize themselves into small groups of 5 or 6 and care for their children on a rotational basis. All the mothers receive an intensive four- day training course at the village level. For each group a basic kit of materials is provided. Since the majority of women are illiterate, a chart of different activities provides the basic framework for the training. The curriculum and training have been provided by an innovative NGO located within Nepal. In an effort to increase capacity, plans to integrate the training function within the Women in Development Sector are underway. At present, approximately 54 groups of six mothers in 11 Districts are operating such programs. The project's success has resulted in an increased demand and groups await their turn for training. In addition to the home- based programme, child care centres have been started to provide services for children between 3–6 years of age. At present, 54, centres involving 1,700 children are functioning.

The programme has been subject to several operating constraints including geographical barriers, inhibiting easy access to programmes, inadequate field staff, dependency on outside funding sources, absence of effective linkage systems, lack of referral services, and conflict between traditional and child-centred approaches to child rearing. In spite of these constraints, the programme's success is demonstrated by the continued strong demand for training. This success is attributed to a variety of factors including a decentralized planning process involving community definition of needs, a comprehensive curriculum, on-site training which respects traditional practices while incorporating new information, and its recognition of the power of group support. Perhaps most importantly, however, is the ability of the program to respond to the tremendous needs of women as they attempt to fulfill their dual responsibilities as income earners and child care providers.

Without information about the quality of child development programmes, claims of high coverage rates are uninformative. It is particularly important to raise questions of quality in conjunction with the increased demand for services. While quality is a complex, culturally defined, and relative concept, programme planners and policymakers must begin to generate standard categories and components of quality against which programmes can be measured. Without some grasp of quality and its associated costs, efforts to move forward on issues of regulation and standard setting will be curtailed.

In the past, issues of quality in child development programmes have been assessed according to three lines of investigation. First, global assessments have been made of a programme's overall climate. Second, specific dimensions of a child development programme have been assessed: (1) structural programme aspects, such as group composition and staff qualifications; (2) dynamic programme aspects that capture children's experiences; and (3) contextual programme aspects, such as type of setting and staff stability. A third and relatively new line of investigation assesses a programme's interactive effects—the relation between child care quality and children's family environments.[52]

Global assessments of quality have relied on overall rating scales judging such factors as personal care, language reasoning, materials, and social development. Global assessments of quality, however, are of little use to practitioners and policymakers seeking to influence specific programme features that are predictive of positive outcomes. Assessments of the structural dimensions of child care, including adult-child ratio, group size, and caregiver training and experience, have generated greater insights into the relative impact of different programme components. Contextual features of child care, such as staff stability, provide a measure of the quality important for a developmental issue such as attachment to primary caregivers. More recently, quality of child care has been assessed in terms of the joint effects on the child of care received in a programme and care received in the home.

In applying various assessment models, one is reminded that children's development is positively affected by exposure to high-quality programmes. In summarizing the essential components of high-quality care generated by the large body of existing data, several components have been consistently indicated and are listed as follows:[53]

- Developmentally appropriate curriculum that features child-initiated learning activities within a supportive environment.
- Careful selection of staff, with an ongoing strategy for inservice and on-site training. Research has established that compared with formal education, child related training or experience is a stronger predictor of caregiver effectiveness.
- Attention to appropriate staff/child ratios.
- Ability of programmes to engage and establish a partnership with parents and the community, empowering them with access to information and an opportunity to internalize positive childrearing practices.
- Strong administrative support, with direct provision of or linkages to comprehensive services such as health, and nutrition.
- Effective evaluation and monitoring procedures allowing staff to monitor and observe children's progress. Evaluation data should also be available, providing feedback to strengthen operations, understand constraints, and foster the development of effective solutions

In summary, the data suggest that quality is best understood as a blending of specific ingredients. For example, a favorable staff-child ratio, in the absence of parent participation, may ultimately have little impact on children's outcomes. It is also important to assess the work environment of the child care setting. Child care environments have been largely studied as a developmental environment for young children, while the quality of the work environment for caregivers has been largely ignored—despite well known high staff turnover rates. Efforts to understand the factors that affect staff-turnover rates and the resulting negative consequences for children must also be undertaken.

Presently, child care in both the developed and developing worlds consists largely of unregulated environments. The growing pressure to expand supply exists without attention to regulation of quality. The unrelenting demand for relatively scarce forms of care implies that more children will be placed in low-quality programmes. Concluding that high-quality child care is beneficial is insignificant in light of the question raised about the negative effects of poor-quality care. Without attention to the quality of care, enrollment statistics are of little significance. Policy analysis must provide insights into both the range of possibilities for as well as the essential characteristics of high-quality child care, and it must determine what these essential characteristics will cost.[54]

Training Child Development Personnel

As indicated by research, and validated by providers and planners of early child development programmes, the training component is perhaps the most important factor associated with implementing and sustaining high-quality programmes. In spite of its importance, training is often the first to be cut as administrators struggle with decreasing resources; ineffective learning materials; didactic and sterile

KENYA

Centres for Early Childhood Education

A major expansion of Kenya's preschool centres, which began in the 1960s, has generated a current infrastructure of 13,000 preschools providing services for a total of approximately 658,000 children between the ages of 3 and 6, reaching approximately one-quarter of Kenya's 2.6 million children in this age group. Much of this growth is attributed to socioeconomic forces, including increased female employment rates, expanded formal education opportunities, rapid urbanization, and disruption of the extended family systems.

Capitalizing on the government's focus on rural development, the system is highly decentralized, giving management responsibility to local communities in support of the "harembee," or self-help, movement. The administrative responsibility is shared by the Ministry of Education, Ministry of Health, and Ministry of Housing and Social Services.

The programme gained momentum in 1972, when the Kenya government joined forces with the Bernard van Leer Foundation to develop an innovative training and curriculum development strategy. Elements of this model include participatory training methods; inservice training and follow-up; partnerships involving parents, local communities, and external assistance agencies; and ongoing research and evaluation. The success of these efforts has resulted in the launching of a National Centre for Early Childhood Education (NACECE) within the Kenya Institute for Education. The NACECE, jointly sponsored by the Bernard van Leer Foundation and the Ministry of Education, plays a major role in the design, development, and dissemination of materials and services including training, curriculum development, research, and programme evaluation. In addition, the NACECE coordinates and disseminates the work of the District Centres, which facilitate the decentralized training of preschool personnel. District Centres for Early Childhood Education (DICECE) annually train 750 preschool teachers. The teachers undergo a two-year inservice programme. Apart from training, DICECEs are also involved in community mobilization to improve the quality of life for preschool children. This is accomplished by ensuring enriched educational opportunities, improved health services, and better nutrition.

The activities of the NACECE and the DICECEs have had far-reaching effects on early childhood education in the country. There is an increased awareness of a concern for the young child among local leaders, parents, and the community. Currently the Kenyan Government and the Bernard van Leer Foundation are supporting the development of a Regional Training and Research Centre at The Kenya Institute of Education. This facility will house the NACECE and coordinate regional early childhood education activities.

methodologies; lack of adequately trained trainers; and an infrastructure incapable of providing needed inservice training, follow-up, and supervision. The following discussion highlights several conceptual underpinnings of high-quality training for early child care personnel.

Effective training strategies for providers of early child development programmes must be characterized by a process that enables learners to acquire skills and knowledge transferable to their particular tasks and roles. It is not a self-contained package easily dispersed, but a process concerned with the growth of knowledge and awareness, the awakening of understanding, and the acquisition of skills and competencies. Successful training programmes are those that recognize what people know and that begin by integrating the required new skills and knowledge into their existing knowledge-base. The acquisition of new knowledge and skills is followed by opportunities for continued reflection and recognition of relevance for the learner's particular needs. Information must be internalized within the learner before it is capable of being translated into action.

A successful training strategy for early child devel-

opment personnel is one that emphasizes the learners' strengths rather than weaknesses; applies active and participatory training methods; perceives the trainer as a facilitator rather than a director; and fosters a cooperative rather than a competitive training environment. Training programmes that incorporate these components have greater likelihood of developing persons capable of self direction and confident in their problem-solving abilities. Though training is moving away from an information centered approach towards an interactive method of experiential learning, training methods must nevertheless be sensitive to the cultural context. Finally, it is essential that the training offered be a continual process providing a balanced mix of structured sessions with opportunities for follow-up and individually tailored supervision that reinforces, supports and strengthens the learning process. This approach, which is both time- and resource- intensive, is often neglected in the drive to increase coverage. If the goal is to create sustainable, high-quality systems of care, then the training approach described here is essential.

As suggested by research and confirmed through the analysis of successful curricula for training early child development personnel, the training content must be organized around a specific early child development curriculum or set of learning principles. A growing body of data supports a child-centered approach that recognizes children at various levels of development. The curriculum should provide opportunities for independent problem solving, meaningful child-initiated conversations with peers and adults, and ample time for exploration of the environment. Within this general approach, the specific content of activities must emerge from, support, and reinforce the values of a given cultural setting. The content of the training programme must respond to the strengths and limitations of a particular group of learners.

While difficult to achieve, the training required by child development personnel requires a balance between theory and practice. Theory should be incorporated into experience in a way that fosters continuous, systematic analysis. Opportunities for analyzing therefore need to be integrated into the training process. The multiple goals of early child development programmes are often reflected in the multiplicity of learning objectives that can overburden personnel with a conflicting set of priorities. With the implementation of continuous training schemes, however, new information can be phased in over time, gradually building on the learner's existing knowledge-base. The development of effective curricula and training strategies based on techniques of experiential learning is encouraging. Planners would benefit from reviewing existing materials and identifying ways in which the available training materials can be adapted and adjusted.[55]

Programme Monitoring and Evaluation

The monitoring and evaluation of early child development programmes has been hampered by a plethora of factors. These factors include lack of available expertise, lack of widely acceptable child development instruments and measures, lack of clearly conceived programme objectives, and lack of financial resources. The field of programme evaluation therefore is wide open and calls for the concerned and committed attention of professionals working in collaboration with programme providers and participants.

The need for strong well-designed evaluations of early childhood development programmes is underscored when one considers the potential uses of evaluation results. For example, documentation of success is a powerful tool for eliciting the attention as well as sustaining the commitment of policymakers and planners. As indicated by the previous discussion of programme expansion, evaluations can provide the necessary information for administrators about when and how programmes should increase scale. Furthermore, programme evaluations can identify which factors are fundamental to achieving programme objectives and therefore necessary components of standards for quality control. In addition, systematic attention to evaluation needs encourages both within- and cross-country comparisons of the relative effectiveness of alternative programming strategies. The information obtained from the application of effective monitoring systems can be used to guide the adaptation and refinement of programme goals and objectives.

Given the multiplicity of programming goals and strategies, innovative data-collection techniques must be employed—techniques capable of documenting both anticipated and unanticipated benefits to participants, families, communities, and institutions. As in all fields of scientific inquiry, investigations must rely on both qualitative and quantitative data-collection methods. The multifaceted nature of early child development programmes provides a range of opportunities for the simultaneous application of both qualitative and quantitative techniques, including, for

BENIN

Early Child Development Centres

Benin is a small country of 4.3 million people located in West Africa. Half of the total population, 80 percent of which reside in rural areas, is less than 15 years of age. Life expectancy is 47 years, and with an infant mortality rate of 100/1,000 live births, it is not surprising that 65 percent of the population lives below absolute poverty. To address the needs of the young child population, a small-scale experimental programme was designed involving the development of early child development centres serving children between 3 and 5 years of age. Between 1981 and 1983, 241 centres providing services for approximately 11,300 children were developed.

Focusing on the comprehensive needs of children, the goal of the programme is to provide a stimulating environment to foster children's self-esteem. Emphasis was placed on play and the development of low-cost materials made from natural resources within the environment. This approach differed markedly from existing teaching methods, which were based on rote repetition methods. Administratively, the programme falls within the Ministry of Nursing, while education and training is provided by the Ministry of Basic Education. Each centre is staffed by monitors, who provide care for 25–30 children. Monitors are civil servants selected by the Directorate of Education and are familiar with local culture and needs.

Monitors receive a one-year training program that combines practical experience with theory and covers a range of topics, including child growth and development, health, traditional practices, development of low-cost materials, and organization and management. Monitors receive some help through an educational assistant recruited locally and supported by parents or local communities. The programme also encourages the active participation of parents by bringing them into contact with an educational system that in turn helps to empower them with knowledge and skills.

It was originally anticipated that the educational assistants would provide an available pool of trained personnel helping the programme increase coverage. The monitors could then function in a supervisory capacity. In reality this has not been accomplished; consequently efforts to expand have not been successful. The assistants were unable to maintain high quality programs and with expansion the Centres became more like creches. At the present time the government has decided to limit further expansion. While the reasons are many, including poor parent participation, political conflict, and lack of resources, the situation illustrates the need for a pool of trained and supervised personnel whose efforts and creativity are rewarded and recognized by the system.

example, creating new variables as well as replicating old measures, assessing process as well as outcome, and generating as well as testing hypotheses. Effective evaluations have always required graceful movement among descriptive analysis, induction and deduction, freely ranging exploration and highly structured investigation. If an early child development programme is successful, it is important to determine how and why; if it is not, a similar line of inquiry is required.

Qualitative evaluation methods include such techniques as direct observation, structured and semi-structured interviews, open-ended questionnaires, focus groups, and analysis of existing literature and documents. The application of these techniques is critical to understanding the underlying phenomena of success. Suggested applications of qualitative techniques in early child development could include an analysis of traditional childrearing patterns and practices that have both positive and negative impact on development; analysis of internal and external variables associated with stress-resistant children and their families; identification of culturally appropriate touchpoints for early intervention; identification of processes and mechanisms for enhancing community

participation; and exploration of the role of alternative models for training child care providers.

Any general discussion calling for increased programme monitoring and evaluation must at some point confront the complex and culturally sensitive issues regarding the identification and selection of instruments and measures. Although the need for indicators has been accepted, the importance of assuring their adequate design and validity has not received as much attention. The failure to use appropriate measures can cause considerable damage to children and families, and it is critical to assure that instruments possess the characteristics necessary to function adequately within the context for which they are developed.

The results of considerable efforts to measure early child development have led to the classification of four major categories of instruments including (1) description or diagnosis of the child's developmental level, (2) detection or screening for developmental disabilities, (3) periodic monitoring of a child's development, and (4) programme evaluation. If the need to develop instruments to measure the child's development is taken seriously, criteria for developing new or evaluating existing instruments must be proposed. The following discussion summarizes some important criteria for both selecting and evaluating existing instruments.[56]

A primary criterion is that the purpose of the instrument be specified and the instrument's characteristics be congruent with this stated purpose. Too little attention has been given to specifying the instrument's purpose, and in many cases the lack of specification or the ambitious combination of multiple purposes has created instruments which do not correspond to any particular purpose. For example, some descriptive instruments are too simple to generate informative data, while detection and screening tools are too complex. A second criterion is the need to clearly define what aspects of development the instrument is attempting to measure. A third criterion requires that instruments be culturally appropriate, which is an issue of extreme importance and complexity. Fourth, the instruments should have adequate concurrent and predictive validity. This is an area in which the major limitations and needs are most obvious. Although greater attention has been given to issues of interobserver reliability, continued efforts are needed to assure adequate reliability among practitioners. In addition, little attention has been focused on the predictive validity of indicators, which is particularly relevant for detection and screening instruments. A final criteria in the selection of indicators relates to the ease with which instruments can be incorporated into programmes. Instruments have been developed that have simple attractive formats, easy-to-produce materials, and both practical and simple ways of reporting results. The remarkable and painstaking efforts thus far to develop simple measurement alternatives have shown that it is feasible to incorporate such tools into a variety of community-based programmes.

An example of one ongoing initiative to develop culturally appropriate indicators is being carried out by the World Health Organization (WHO). In this project, WHO is addressing the need to develop a systematic and suitable evaluation process by preparing simple but standardized technology that can be adapted to different circumstances for monitoring or surveying psychosocial development. Objectives of the project, which is being carried out in China, India, Pakistan, Argentina, Thailand, and Senegal, are to develop simple and reliable measures of physical growth and psychosocial developmental milestones and to prepare a locally adaptable prototype home-based screening record for children under 7 years of age. The screening record could be used by family, primary health care workers, and other community members. Another objective of this initiative is to design a framework for identifying the culture-specific environmental factors predictive of physical growth and psychosocial development. The long-term goal of this initiative is to develop a set of intervention programmes based on the data generated by the application of the project's screening instruments.[57]

SUMMARY AND POLICY IMPLICATIONS

From Theory Into Action

The scientific evidence presented during the first week of the seminar powerfully demonstrates the importance of the early years of the child's life and the long-term benefits associated with increased investments in well-conceived and properly ...anaged programs. The following section attempts to highlight some of the major theoretical arguments.

Child development begins at conception. Following nine months of growth and maturation in utero, chemical changes initiate the birth process. This transition to life outside the mother constitutes the first of several biological-behavioural shifts in development. Research has demonstrated the remarkable abilities of newborns to seek out and process information that will ensure their survival and healthy development. Their basic sensory capacities for hearing, touching, smelling, and tasting are mature at birth, and the competence with which most newborns use these capacities is dramatic. Moreover, young infants are equipped with a repertoire of communication skills which enable their participation in a complex affective system. Social interaction in early infancy is a rule-governed, goal oriented system in which both the infant and its caregiver are active participants. Appropriate social interaction is critical to infants' physical and psychosocial development.

Exploration into the path of normal development has led Brazelton and his colleagues to develop a particularly useful model for understanding the drama of early development. According to this model, development is fueled by three critical sources of energy. The first source is the maturation of the central nervous system which drives the infant in relentless fashion to achieve higher levels of development. The second set of energies is the internal feedback system that provides the infant with a sense of inner-competence. The third source of energy propelling early child deve'opment is the external feedback system of rewards and reinforcement provided by the parents and outside environment.

Normal infants have a sufficient amount of energy to demand responses from their environments. Malnourished infants, surrounded by the stresses of poverty, are unable to elicit responses from depleted caregivers. The stage has been set to fuel the cycle of poverty. Before these infants reach their first birthday, they have already learned how to fail. If we are to design successful, high quality programmes for at-risk infants and their families, the identification of critical periods or touchpoints when the infant-caregiver-environment system is particularly responsive to both receive and provide information is critical.

Moving along the developmental continuum, the period from 3 months to 12 months is characterized by remarkable increases in size and strength accompanied by advances in coordination and motility. This period is also characterized by a steady growth of memory and an increased capacity to understand the basic properties of objects and spatial relations. Development in this period evolves from children's own efforts to understand their environments. They actively seek out information which in turn is assimilated into their existing knowledge base. By the end of the second year, changes in the infant's self-concept is evidenced by declined distress at separation, and an increased ability to engage in symbolic play, to imitate absent events, and to express themselves in elementary words and phrases. The changes that transform the infant into a young child reflect the interplay among the patterned sequence of change in biological, behavioural, cultural, and social domains of development. The complexities and subtleties involved in accounting for how children develop continues to capture the interest of those attempting to unravel its mystery.

Developmental change in early childhood (the period from 2.5 to 6 years of age) evolves more slowly than that witnessed in the first two years. A dramatic accomplishment during this period is the acquisition of language. Children's skills at this time present a patchwork of vulnerability and ability, logic and magic, insight and ignorance. They have relatively little understanding about the world in which they live, and exert little control over it. Through active interaction, exploration, and observation of the environment, the child creates his own learning. Play facilities the transition to higher levels of cognitive development; the "as if" nature of play allows children to perform activities that are more developmentally advanced than those that they can realistically achieve. In the process of play, a sense of self-esteem and confidence is fostered, which in turn supports and reinforces the child's capacity for effective action.

The unfolding of early behaviour is most reasonably interpreted according to an ecological framework. In this view, the context-specific factors in the child's environment interact with the biological properties of the child. The child's environment can be conceptualized as four interrelated layers including: the nuclear

and extended family; the immediate community of peers and neighbours; the institutional community of schools and other services; and a set of cultural values, beliefs, and rituals. The child's developmental pattern is dependent upon both the frequency and complexity of interaction within each of these systems. Positive experiences within these four levels create a child with a positive self concept who seeks, establishes, and maintains the kinds of supportive relationships that promote successful outcomes. The cycle of success can be as perpetuating as the cycle of failure.

In spite of the strengths which are often found to characterize families of resilient or invulnerable children living in stressful economic conditions, it is clear that the developmental costs of poverty are high. These costs can be measured in terms of school drop-out, unemployment, delinquency, and the intergenerational perpetuation of failure. As in the early infancy period, we must continue in our search to identify culturally determined touchpoints or windows of opportunity when programmes that attempt to prevent negative outcomes will be most effective. Herein lies an element of hope, for change in one level of the child's environment can create positive transformations in another level.

Armed with this evidence, the policymaker no longer questions the need for early child development programmes, but seeks to determine how and when to implement these programmes. The following section summarizes several of the programming challenges that emerged from the seminar.

Programming Challenges

In addition to having the confidence provided by scientific evidence, those involved in the translation of theory into action should have a sense of optimism. In the past, policymakers have been forced to rely on data from the industrialized world to justify their investments in early child development activities. More recently, a growing body of data from the developing world indicates the long term benefits to children and their families, as reflected by increased primary school enrollments and enhanced primary school progress and performance. These data reinforce the assumption that not only are similarly positive effects of early interventions possible in the developing world, but the potential for bringing about improvements may be greatest when social and economic conditions are more severe.

Since the International Year of the Child (1979), hundreds of demonstration programmes and projects have underscored the possibilities for early child development programmes to increase and foster children's abilities to cope with and creatively adapt to their environments. The expansion of child development programmes over the last decade has been dramatic. For example, in Korea during 1982-1986, the percentage of children attending early child development programmes increased from 8 to 57 percent. The expansion of government supported centre-based programmes, stemmed in part from the increased need for child care services resulting from the entrance of women into the labour force. This expansion is also seen in Sri Lanka's efforts to cover all 5-year-old children by extending the age of entry into primary school downward and transforming the first year of schooling into a kindergarten for all. Thailand now provides some form of preschool for approximate 24 percent of all children between the ages of 3 and 6 through non-formal centre-based programmes combined with parental education activities. In the Philippines, 19 percent of all children aged 3 to 6 participate in an early childhood enrichment programme which delivers learning opportunities to disadvantaged preschool children in a structured centre-based setting. In China, The All China Women's Federation has created over 200,000 local parent education programmes within the past four years. The curriculum emphasizes the interaction between physical, nutritional, and psychosocial dimensions of development. The programme, designed in collaboration with the community, is integrated into existing preschools, primary schools, or in conjunction with periodic medical visits.

Several critical factors can be identified in the rapid expansion of these successful initiatives. Of primary importance is a strong political commitment that enables the identification of the resources needed to achieve a set of clearly specified programme goals and objectives. Political support is also critical to ensure stability, commitment, and continuity of programme leadership. Additional characteristics of these programmes include the application of media channels to create demand, the development of simple and efficient information systems to monitor progress and measure performance, and the implementation of flexible interactive training approaches that combine short-term instruction with ongoing field-level supervision and follow-up.

On closer inspection of the content characterizing

the current array of programming initiatives, the wide range of complementary programming strategies found both within and across geographic regions is impressive. Programmes can be classified according to a three dimensional model. The first dimension classifies programmes into five categories: giving direct attention to children, educating caregivers, promoting community development, strengthening institutional capacities, and increasing demand and advocacy. The second dimension identifies several programming guidelines, including the need to provide integrated services, the need to enlist community participation, and the need to reach a significant percentage of at-risk children with high-quality programmes while containing costs. The third dimension defining programme variability, relates to a programme's ability to target specific age groups with developmentally appropriate interventions. During the seminar, the lessons of success as well as the frustrations of failure involved in achieving programme objectives were revealed through the detailed analysis of the five case studies which were summarized in the previous section of this report. These included two pilot demonstration projects in Nepal and Benin as well as a centre-based programme in Kenya. The two case studies from India and Colombia underscored the constraints and benefits when political commitment is harnessed towards expanding programmes to scale.

Programming success in early child development activities is consistently characterized by a well defined of set of variables. For example, a thread often woven into programming objectives emphasizes the simultaneous nature of survival and development and the interaction among the physical, mental, social, and emotional dimensions of child development. Another characteristic defining success, is the emphasis placed on empowering caregivers and communities with the knowledge and skills needed to provide for the survival and developmental needs of their children. Successful programmes recognize that the primary responsibility for the child rests within the home and all efforts to foster development must support, complement, and reinforce the childrearing responsibilities of the family. Sustainable programmes are able to identify local patterns and practices of childrearing which have for generations provided culturally appropriate solutions. Once identified, this knowledge is used to inform the design of locally appropriate programmes, integrating when appropriate, new information and the creation of innovative solutions. Successful programmes encourage a level of participation beyond the formal definitions of community participation and include the child as an active participant in the creation of its own knowledge. Moreover, the fostering of knowledge is not dependent on the utilization of complex technologies but can be developed through the application of low-cost materials combined with a caregiver exposed to a creative training curriculum and motivated by an ongoing system of rewards and incentives.

As the scientist is humbled by the mystery of development, the policymaker is awed by the magnitude of the task before him. The discussion of programme implementation indicated that there is much to accomplish. Although a detailed analysis of child development programmes in the developing world is not available, one is well aware of major areas of inactivity. While considerable progress has been made in many (though not all) countries in Latin America and Asia, programmes are nonexistent in many parts of Africa. Moreover, many innovative programmes find themselves unable to secure sustainable sources of revenue necessary to expanded coverage while maintaining programme quality. Often the quality of existing programmes is so poor that positive benefits to the child are minimal, and in some instances negative outcomes may be apparent. Moreover, the current set of strategies is less successful in reaching high-risk mothers and infants during the prenatal period through the first two years life with integrated programmes that provide the appropriate balance of health, nutrition, and psychosocial components. The vertical thinking and sectoral competition characterizing government bureaucracies and international donors as well as child care providers often conflicts with this need to provide a comprehensive set of services.

As revealed by the analysis of case studies and the ensuing discussions of programming issues, the challenges are set before us. In the first instance, we will continue to face economic questions that require a major adjustment in the allocation of resources, counteracting the present tendency for governments and other social services to meet economic pressures by cutting spending in these sectors. The manner in which these decisions are made will dramatically effect the condition of childhood. A second issue confronting policymakers and planners is the growing economic and social disparities among nations which in turn polarize the opportunities for children to reach optimal patterns of growth and development. A third major challenge to meeting the needs of families

and children in the early years of life, relates to startling social and demographic changes, including increasing female labour force participation, rapid urbanization, and the erosion of stable family-units.

These challenges require solutions that demand long-term commitment by professionals across many disciplines to address issues related to actual rather than theoretical integration and convergence of services. How and when to involve governments in the complex process of expansion and how to define the critical components in programme quality are pressing concerns. Utilizing the advances in media technology, we must continue in our efforts to create flexible training strategies that are able to respond to the diversity of skills and needs reflected by early child development personnel. As indicated, without our commitment to the infrastructure needed to supplement intensive training courses with ongoing supervision and follow-up, the kind of programmes we expect will remain an ideal. The frustrations resulting from inefficient monitoring systems must be assuaged by effective information management systems enabling projects to adjust to a changing array of circumstances. Finally, we must continue to allow for the systematic interaction among families, children, and communities. Programmes should not only incorporate and build upon parental wisdom but must begin to identify the culture-specific opportunities for partnerships with parents that are open to us, for a brief amount of time, by the child during his passage through infancy and early childhood.

National and International Capacity Building

The first Global Innocenti Seminar provided the opportunity for UNICEF, government counterparts, and collaborating institutions to respond to these challenges. The collective expertise reflected by the participants and resource persons from around the world created a network that should be called on as UNICEF seeks to sharpen, refine, and develop its early child development strategies for the 1990s. If UNICEF is to assume an active and significant role in strengthening early child development efforts throughout the world, it must place greater emphasis on systematizing operations related to staffing, training, programming and evaluation. For example, UNICEF headquarters could provide opportunities to engage in cross-country comparisons, particularly those that help to define and understand policy issues related to the expansion and financing of early child development programmes. To meet the growing demand for services, UNICEF's regional offices could strengthen networks to foster the systematic review and adaptation of materials, guidebooks, curricula, training schemes, and culturally specific indicators of child development. At the country level, the developmental needs of the young child could be documented in annual situation analyses.

It is expected that seminar participants will evaluate ongoing activities and develop regional networks to enhance the dissemination of existing information and programme experience. In addition, participants will be expected to carry out a series of advocacy efforts both within and outside UNICEF circles of institutions. Using the seminar framework as a guideline, as well as the Child Development Training Package available through the Training Section at UNICEF's New York Headquarters, seminar participants intend to carry out similar child development training activities, seminars, and workshops for UNICEF staff, and government counterparts at both country and regional levels.

Since an objective of the UNICEF Innocenti Centre's training programme is to foster ongoing activities related to issues identified during the Global Seminars, a series of occasional papers will be published by the Centre to provide a more detailed analysis of related topics. In addition, the Centre has agreed to support a working group to develop a framework for the selection and review of existing child development instruments and measures. Finally, a report will be issued at a later date summarizing the degree to which seminar participants have been able to achieve their proposed follow-up activities.

The seminar also called attention to a critical opportunity to bring public attention to issues of child development during the World Conference on Education For All: Meeting Basic Learning Needs. One objective of the Conference must be to identify ways to strengthen the education system's recognition of the importance of the early years as a child's preparation for all future schooling. Although there is a tendency for education to concentrate on teachers and facilities, we must not fail to recognize that the most important input to the school system is the child. Children who have participated in early child development programmes not only are more likely to be enrolled in school but are also equipped with an enhanced capacity to adapt to, respond to, and even change the environment of the school, once they arrive. Thus, it is hoped that insights obtained during the seminar will be used to give child devel-

opment activities a high priority within the Conference objectives.

The development of children in both the developed and developing worlds is jeopardized by a complex set of interlocking forces. It is a worldwide phenomenon calling for a worldwide response. Perhaps UNICEF's greatest contribution to the promotion of early child development activities could be to harness the commitment, as it has done in the past, of governments, nongovernmental agencies, international donors, and public and private interest groups in an Alliance for children—an Alliance, however, that is ready to recognize, understand, and respond to the integrated needs of children, families, and communities. Their collective voices, crying for help, demand sustainable programmatic responses which are capable of preventing the intergenerational perpetuation of failure by providing opportunities that foster a sense of self-esteem and confidence. It is a cry that the societies of the world can no longer afford to ignore.

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INNOCENT GLOBAL SEMINAR
EARLY CHILD DEVELOPMENT
ANNEX 1

UNICEF International Child Development Centre, Spedale degli Innocenti, Florence, Italy 12-30 June 1989

AGENDA

WEEK ONE
A Theoretical Basis for Investing in Early Child Development: A Review of Current Concepts

Monday, June 12	Seminar Overview	
Morning Session	Welcome and Introduction	J. Himes B. Ogun B. Myers A. Silverman
	Goals and Objectives Content Overview	C. Landers
Afternoon Session	Trends and Issues in ECD: An Integrated Approach to Programming	B. Myers
	A Rationale for UNICEF Activities in ECD	
Tuesday, June 13	Prenatal and Neonatal Development	
Morning Session	• A Psychobiological Model of Early Child Development • Capacities of the Newborn	E. Tronick
Afternoon Session	• Early Patterns of Mother-Child Interaction • Mothers and Infants At-Risk	E. Tronick
Wednesday, June 14	Child Development: The First Two Years	
Morning Session	Factors Affecting Prenatal, Neonatal, and Early Child Development	N. Kotchabhakdi
Afternoon Session	Impact of Malnutrition on Early Development	N. Kotchabhakdi
	Critical Periods in Early Development: Touchpoints for Intervention	
Thursday, June 15	The Young Child From Two To Six	
Morning Session	An Overview of Developmental Stages • Cognitive • Social/Emotional • Language • Motor	K. Sylva
Afternoon Session	Social and Cultural Influences on Development Creating Effective Learning Environments	K. Sylva M. Swaminathan
Friday, June 16	The Young Child (Continued)	
Morning Session	The Role of Play in Early Development	M. Swaminathan
Afternoon Session	Impact of Early Interventions on Later Performance: Programme Implications	K. Sylva

WEEK TWO
Programme Policies, Strategies, and Reality

Monday, June 19	Early Childhood Development Programme Strategies	
Morning Session	An Examination of Five Complementary Approaches A Review of UNICEF's Guidelines	R. Myers
Afternoon Session	Country Programmes in ECD: Participant Presentations	Participants
Tuesday, June 20	Costing, Financing and Programme Coverage	
Morning Session	Considerations in Financing ECD Programmes	J. Himes
Afternoon Session	Going to Scale in ECD Programmes	R. Myers
Wednesday, June 21	Case Studies: An Examination of Four ECD Programmes	
Morning Session	India: The Integrated Child Development Services	S. Hong
Afternoon Session	Benin: Early Child Development Centres	M. d'Agostino
Evening Address	**Urie Bronfenbrenner—Coping Strategies in a Chaotic World**	
Thursday, June 22	Case Studies (Continued)	
Morning Session	Columbia: The Family/Community Day Care Programme	A. Santamaria
Afternoon Session	Kenya: Early Childhood Education	A. W. Njenga
Friday, June 23	Site Visits	

WEEK THREE
Critical Issues in Programme Implementation

Monday, June 26	Monitoring and Evaluation of ECD Programmes	
Morning Session P.M. Shah	WHO Project: A Multi Country Study of Psycho-social Indicators	R. Lansdown
Afternoon Session	Strengthening Monitoring and Evaluation Capacity	
Tuesday, June 27	Promoting Child Development on the National Level	
Morning Session	Child Development and the Political Agenda	B. Ogun C. Castillo
Afternoon Session	Media Applications: Strategic Considerations in Mobilization and Planning	E. Palmer
Wednesday, June 28	Training and Curriculum Development	
Morning Session	Training ECD Personnel: An Active, Participatory and Experiential Approach	K. Torkington
	Training UNICEF Staff in Child Development	A. Silverman
Afternoon Session	Issues in Quality Control	C. Landers
Thursday, June 29	Intersecting Needs: Women's Work and Child Care	
Morning Session	Impact of Social, Economic and Political Forces on Women in the Developing World	H. Badran
	Factors Affecting the Response of Resource-poor Households to the Demands of Child Care	
Afternoon Session	Meeting the Child Care Needs of Poor Working Women Case Study: Nepal	C. Landers
Friday, June 30	Summary Policy Implications	
Morning Session	Summary: Major Trends and Issues	B. Myers
	Implications for UNICEF Policy	J. Himes
	Participant Follow-up Activities: Country and Regional Proposals	A. Silverman C. Landers
	Closing Address	Participants

The International Child Development Centre is grateful to the staff of the Institutio for arranging the following visits to early child development programmes.

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Pistoia, Italy

Scuola Makarenko
Scuola Turri
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ANNEX 2

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ANNEX 3

Invited Speakers: Biographical Descriptions

Hoda Badran is currently Professor of Community Organization and Social Research at the Helwan Unviersity, Cairo, Egypt. She has had extensive experience working with UNICEF, including her position as the UNICEF Representative in Sri Lanka and the Maldives, as well as her current responsibilities as UNICEF's Regional Advisor for the Promotion of Women in the Middle East. In addition, she has consulted on Women in Development issues with a wide range of international organizations.

Urie Bronfenbrenner is Professor of Human Development and Family Studies at the College of Human Ecology, Cornell University, New York, U.S.A. As described in his book **The Ecology of Human Development** Dr. Bronfenbrenner originated a major developmental theory that considers the development of the child through his interactions in a variety of interlocking systems. The major thrust of his energies and scholarly efforts has focused on the translation of research into public policy and practice. He is the author of numerous publications and has been a keynote speaker at forums around the world.

Carlos Castillo is the UNICEF Representative in Haiti, where he is actively involved in the promotion of programmes in Child Survival and Development. He has a background in Sociology and Social Planning, from Cornell University, Ithaca, New York. Before assuming his position in Haiti, Mr. Castillo was a management consultant to UNICEF in Bogota, Colombia. He brings to his work a wide range of expertise in planning for both rural and urban environments.

Micheline d'Agostino is an associate of the International Children's Centre, Paris, France and concentrates her efforts on the development of preschool education programmes and the training of trainers in early childhood. In addition, her interests have focused on the integration of health and nutrition components into preschool curriculum. Ms. d'Agostino has contributed to the development of preschool education in a variety of countries in the developing world, including Benin, Mali, Papua New Guinea, Madagascar, and Viet Nam.

James Himes is the Director of the UNICEF International Child Development Centre, Florence, Italy. His previous assignments in UNICEF were Director of the Planning Office and Chief of the Americas Section. Before joining UNICEF in 1981, he held various positions in the Ford Foundation, including Head of the Latin American and Caribbean Programme and Representative for Colombia and Venezuela. Dr. Himes received his doctoral degree in Development Economics and International Affairs from Princeton University.

Sawon Hong is Chief of the Integrated Child Development Services (ICDS) Section, UNICEF, New Delhi, India. Prior to this appointment, Dr. Hong served as a Programme Evaluation Officer in UNICEF's New York Headquarters. Dr. Hong received a Ph.D. in Sociology and Demography and has been involved in the design and evaluation of population programmes in Bangladesh, Thailand, Korea, Kenya, and Indonesia.

Nittaya Kotchabhakdi is an Associate Professor of Paediatrics and Chief of the Child Development Unit, Faculty of Medicine, Ramathibodi Hospital, Mathidol University, Bangkok, Thailand. Through her research and clinical practice, Dr. Kotchabhakdi emphasized the importance of interaction between the child and the environment, and through simple techniques she encourages parents to facilitate their children's growth and development. Working with family and community-based centers, Dr. Kotchabhakdi has fostered the integration of child development concepts into paediatric well-baby care services in Thailand.

Cassie Landers is a member of the Consultative Group on Early Childhood Care and Development, UNICEF, New York. Through her work with the Consultative Group, Dr. Landers has the opportunity to assess child development programmes and activities throughout the developing world. After completing her studies in Human Development and Public Health at Harvard University, Dr. Landers has worked with UNICEF and other international donors to design effective programming strategies in India, Nepal, Korea, Viet Nam and China.

Richard Lansdown is Chief Psychologist and Head of the Department of Psychological Medicine, The Hospital for Sick Children, London, England. Through numerous publications, Dr. Lansdown has brought attention to the unique psychological problems of sick and handicapped children. His specific clinical interests focus on children confronting a terminal illness. Dr. Lansdown's work has been well received throughout the developing world.

Robert Myers is the Coordinator of the Consultative Group on Early Childhood Care and Development, UNICEF, New York. Dr. Myers extensive writing and field experiences both with UNICEF and the Ford Foundation has encouraged major international donor agencies to focus attention on child development initiatives as a critical component of successful child survival strategies. Dr. Myers has been a dominant force behind the child development activities in Latin America, and at present is writing a book tentatively titled, ***The Twelve Who Survive***, which provides a comprehensive perspective on early childhood development programmes in the developing world.

Anne Njenga is an associate of the National Centre for Early Childhood Education (NACECE) at the Kenya Institute of Education. Working collaboratively with the Bernard Van Leer Foundation and the Ministry of Education, Ms. Njenga's efforts have made a significant contribution to the high quality of Kenya's preschool education system. In particular, she is well respected for her work in the development of training programmes, low-cost preschool curriculum materials, and the mobilization of parent-community participation.

Bilge Ogun is a Senior Programme Officer at the International Child Development Centre, Florence, Italy. In this capacity she is responsible for the Child Rights Programme, as well as the Centre's training activities. Prior to these responsibilities, Ms. Ogun held positions as the UNICEF Representative in Rwanda and the Special Assistant for UN Emergency Operations in Ethiopia. She has also held positions with SAVE the Children, Ford Foundation, and CARE in Africa, the Middle East, and New York.

Edward Palmer is an independent consultant in educational media technologies from a base in Philadelphia, Pennsylvania. He was a major force in the development of Children's Television Workshop and Sesame Street in his capacity as Vice President of Research from 1968 to 1984. He has had extensive international experience in the design, application, and evaluation of media technologies for education and health. Dr. Palmer is the recent author of a timely book, ***Television and America's Children: A Crisis of Neglect***, Cambridge: Oxford University Press, 1988.

Edward Tronick is Professor of Paediatrics, Harvard Medical School, and Director of the Child De-Development Unit, Children's Hospital, Boston, Massachusetts. Working together with Dr. T. B. Brazelton provides him with an opportunity to teach pediatricians, researchers and other clinicians about normal child development. Prior to assuming the directorship of the unit, Dr. Tronick was Professor of Human Development, University of Massachusetts. He is well-known for research focused on cross-cultural childrearing patterns and the development of emotions i children.

Ana Sanz de Santamaria is the Director of the Colombian Institute of Family Well-Being, Bogota Branch, Colombia. In this capacity Ms. Santamaria is responsible for the administration of "Bienstar," an innovative community-based family day care programme providing health, nutrition, and early education for over 700,000 of Colombia's children in poverty. Ms. Santamaria has a degree in education from the University of Geneva, Switzerland.

P. M. Shah is the Medical Officer, Programme of Maternal and Child Health, and Family Planning, WHO, Geneva, Switzerland. Prior to joining WHO in 1978, Dr. Shah was Professor of Pediatrics and Director of the Institute of Child Health, Bombay, India. Dr. Shah's work and commitment to child health problems in rural areas and urban slums are reflected in his writings of six books and over 150 publications. As part of his ongoing activities, Dr. Shah is Director of the WHO multicountry initiative to develop indicators of psychosocial development in early childhood.

Mina Swaminathan is an independent consultant with experience in India and other Asian countries. Her expertise is in the design and development of innovative teaching strategies for parents and early child care personnel, and she has figured prominently in the growth of India's early child development programme including the Integrated Child Development Services (ICDS) and Mobile Creches. She has published several important practical references, including a manual for teachers on play activities for children 3-6 years, a sourcebook for parents and teachers of children during the first three years, and a study of child care facilities for low-income working women in India.

Kathy Sylva is a Professor of Primary Education, University of Warwick, Coventry, England. After receiving a doctorate in Developmental Psychology at Harvard University, Dr. Sylva was until recently a Professor of Developmental Psychology at Oxford University. Her work on children's play, innovative preschool curricula, and coping patterns in response to stress has been widely published in the child development literature. In addition, Dr. Sylva has worked as a consultant in evaluation of early child development programmes in South East Asia.

Alan Silverman is a Training officer, Training Section, UNICEF Headquarters, New York, and is responsible for the development of UNICEF's early child development training activities. Since 1974, he has served as a UNICEF consultant and Programme Officer in several West, Southern and East African countries. Mr. Silverman received a master's degree in Social Planning and Programme Development and has served as a consultant to several nongovernmental organizations.

Kate Torkington is Head of Training, Bernard van Leer Foundation, The Hague, the Netherlands. In this capacity, Ms. Torkington is committed to the development of an innovative training policy that supports and strengthens the training components of the Foundation supported early child development initiatives. To facilitate this process, Ms. Torkington will help to develop the first Regional Training and Resource Centres (RTRC) in Singapore. Ms. Torkington brings to her work a wide range of experience in parent, family, and community education.

ANNEX 4

Background Reading Materials

General Readings:

UNICEF Programme Guidelines. Volume 5—Early Childhood Development, CF/PROG/IC/87-37, May, 1989.

UNICEF Training Package. Early Childhood Growth and Development. Prepared by Training Section in cooperation with Programme Division, CF/EXD/IC/87-37, December, 1987.

Week One: A Conceptual Look at Early Childhood Development

Brazelton, T. B. "Early Intervention: What does it Mean?" Theory and Research in Behavioural Pediatrics, Vol. 1, 1982.

Lester, M. L., and Brazelton T. B. "Cross-Cultural Assessment of Neonatal Behaviour". In Wagner & Stevenson (Eds.) Cultural Perspectives on Child Development. San Fransisco: Freeman & Co., 1982.

Tronick, Edward. "Emotions and Emotional Communication in Infants," American Psychologist, Vol. 44, No. 2, 1989.

Kotchabhakdi, Nittaya. "Concepts of Child Development." In Handbook of Asian Child Development and Child Rearing Practices. Bangkok, Thailand.

Kotchabhakdi, N. "Nutritional Needs of the Child." In Handbook of Asian Child Development and Child Rearing Practices. Bangkok, Thailand.

Jowett, S., and Sylva, K. "Does Kind of Pre-School Matter?" Educational Research, Vol. 28, 1986.

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Swaminathan, Mina. "Home, Community and Cultural Resources in Early Childhood Care and Education," IDRC/UNICEF/UNESCO Regional Workshop on Early Childhood Eduction, Bangkok, 1-5 December 1986.

Mauriras-Bousquet, M., Ratnaike, J., van Oudenhoven, N., Rossie, J.P., Guruge, A.W.P., Michelet, A. UNESCO-UNICEF Cooperative Programme. "Games and Toys in Early Childhood Education," Digest 25, Paris, France, 1989.

Week Two: Programme Policies, Strategies, and Reality

Myers, Robert. "Programming for Early Childhood Development—What Can We Do?" Paper prepared for UNESCO/UNICEF Regional Meeting on Early Childhood Development, Abidjan, The Ivory Coast, 18–22 January, 1988.

Frankenburg, W. and Kennedy, J. Denver Developmental Reference Chart. University of Colorado Health Sciences Center, Denver, Colorado, 1981.

Myers, R., and Hertenberg, R. "The Eleven Who Survive: Toward a Reexamination of Early Childhood Development Program Options and Costs," World Bank Discussion Paper—Education and Training Series, Report No. EDT69, Washington, D.C., 1987.

Sanz de Santamaria, Anita. "Programma Social Hogares Comunitarios de Bienstar." A Paper prepared for the Innocenti Global Seminar on Early Child Development, June 1989.

Arnold, Carolyn. "Women's Work and Child Care in Nepal: Project Entry Point." A case study prepared for UNICEF, New York in collaboration with UNICEF, Nepal, March, 1989.

Hong, Sawon. "Integrated Child Development Services—India Case Study" A paper prepared for the Innocenti Global Seminar on Early Child Development, June, 1989.

UNESCO/UNICEF/WFP. "The Early Childhood Development Centres in Benin," Notes and Comments Series, Issue No. 181, UNESCO: Paris, France, 1988.

Njenga, Ann. "The Pre-School Education and Care Programme—A Kenyan Experience," A paper prepared for the Innocenti Global Seminar on Early Child Development, June, 1989.

Bronfenbrenner, Urie. "Ecology of the Family as a Context for Human Development: Research Perspectives" Developmental Psychology, Vol. 22, No. 6, 1986.

Bronfenbrenner, Urie. "Strengthening Family Systems," In E.F. Zigler and M. Grank (Eds.), The Parental Leave Crisis, New Haven: Yale University, 1986.

Week Three: Critical Issues in Programme Implementation

WHO/Division of Family Health, Division of Mental Health. "Protocols for the Development and Field Testing of Technizues for Monitoring Growth and Psychosocial Development," WHO/MCH/MNH/86.1, 198.

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Palmer, E. "Fitting the Message to the Medium Audience and Setting." A discussion paper prepared for the Innocenti Global Seminar on Early Child Care and Development, Florence, Italy, June, 1989.

Myers, R., Indriso, C. "Women's Work and Child Care," A paper prepared by the Consultative Group on Early Childhood Care and Development for the Rockefeller Foundation, Feburary, 1987.

ANNEX 5

Resource Directory

Biber, Barbara. Early Education and Psychological Development. New Haven, Conn.: Yale University Press, 1984.

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Johnson and Johnson, Paediatric Round Table Series:

Maternal Attachment and Mothering Disorders: A Round Table, Edited by M.H. Klaus, T. Leger and M.A. Trause

Social Responsiveness of Infants, Edited by E.B. Thomam and S. Trotter

Learning Through Play, P. Chance

The Communication Game, Edited by A.P. Reilly

Infants At Risk: Assessment and Intervention, Edited by C.C. Brown

Birth, Interaction and Attachment, Edited by M. Klaus and M. O. Robertson

Minimizing High-Risk Parenting, Edited by V. Sasserath and R.A. Hoekelman

Child Health Care Communications, Edited by S. M. Thornton and W.K. Frankenburg

Childhood Learning Disabilities and Prenatal Risk, Edited by C.C. Brown

The Many Facets of Trust, Edited by C.C. Brown

Play Interactions: The Role of Toys and Parental Involvement in children's Development, Edited by C.C. Brown and A.W. Gottfried

Group Care for Young Children: Considerations for Child Care and Health Professionals, Public Policy Makers, and Parents, Edited by N. Gunzenhauser and B.M. Caldwell.

Infant Stimulation: For Whom, What Kind, When, and How Much? Edited by N. Gunzenhauser

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Roopnarine, J.L. and Johnson, J.E. (Eds.) Approaches to Early Childhood Education. Columbus, Ohio: Merrill Publishing Company, 1987.

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Child Development:

The Sensational Baby: Newborn Sensory Development. Polymorph Films, Boston. MASS.
The Brazelton Neonatal Behaviour Assessment Scale (BNBAS). T.B. Brazelton.
Developmentally Appropriate Practice: Children Ages Birth Through Five Years. National Association for Education of the Young Child (NAEC).
Play and Learning. NAEYC.
How Young Children Learn to Think. NAEYC.
Developmentally Appropriate Practice: Children Ages Birth Through Five Years. (NAEYC)
Stepping Stones: Pathways to Early Development. Agency for Instructional Technology.

Child Development Programmes:

Nepal: Entry Point: An Early Child Development Programme.
Korea: The Early Childhood Development and Parent Education Programme in Korea.
India: Going to Scale: The Growth of Early Child Development Programmes.

UNICEF ECD Training Package:

What is Child Growth and Development?
Why is Attention to Early Child Development Important?
Prenatal Development.
Visual and Auditory Alertness in the Newborn
The Story of Childhood: Learning to Think
INCAP Study in Guatemala
A Comparison of Two Thai Children
Cognitive Development
A Cross-Cultural Approach to Cognition
Language Development
Bathing Babies in three Cultures
Sibling Rivalry
A Cross-Cultural Approach to the Acquisition of Sex Roles and Social Standards
Going to Scale
Making Low Cost Toys
New Paths for Puno

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